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The influence of confession inconsistencies on juror decision-making

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Ultimately, this work is dedicated to the wrongfully convicted, in the hope that through science we can set things to rights.

For science, for innocence.

Abstract

False confessions occur at a rate that contradicts the commonsense belief that only the guilty confess. Wrongful conviction statistics show that more than a quarter of people exonerated due to retrospective testing of DNA evidence were initially convicted based either solely or partly on their false confession to the crime. This has prompted a large body of research, which has contributed to understanding of how and why such false confessions occur, resulting in recommendations to reduce their instance. Recently, researchers have begun to investigate why juries accepted these false confessions in the first place, with case studies confirming that jurors are prone to accepting confession evidence that, in hindsight, should have been rejected. However, the picture is not entirely bleak, with other empirical evidence indicating that jurors will sometimes (albeit rarely) reject confession evidence that they view as potentially false. The basis of the variance in juror decision making on confession evidence is the focus of the current series of studies.

In four chapters, we describe a series of mock-juror experiments investigating how jurors process confession evidence, and why they will sometimes accept a problematic, low quality confession as true, while at other times will reject the confession. Using a combination of typed confession statements, transcripts of police interview, and police summary statements, we aimed to identify the situational factors (confession attributes) that influence juror judgments of suspect guilt. Additionally, using existing scales (Need for Cognition, and Attitudes Toward Coerced Confessions) we tested the contribution of dispositional factors (juror attributes) in moderating juror decision making.

We found that the confession attribute of consistency significantly influenced juror judgments of suspect guilt, but that this effect differed dependent on the type of inconsistency present in the confession (Chapter 2). Mock-jurors were not concerned about the suspect contradicting and then self-correcting their previous statements, but when the suspect made

errors that could be proven factually incorrect with a secondary piece of evidence, judgments of suspect guilt were reduced. This particular finding suggests that jurors might more easily rationalize why a suspect might be telling a narrative in a way that requires backtracking and correction (e.g. deliberate mistruth, confusion due to intoxication), than why a suspect would get key facts of the crime entirely wrong.

However, further testing revealed that not all factual errors were treated equally (Chapter 3). When factual errors were parsed out into errors that appeared to be amplifying or downplaying the crime severity, we found differential effects of directionality on judgments of guilt that were not aligned with how we had hypothesized jurors would process such inconsistencies. For example, we believed that if the suspect confessed to a crime greater than the facts would imply, participants might infer that he is making himself look worse, and wonder why anyone would confess to a greater crime than they actually committed, thus discounting the confession. On the other hand, if the suspect confessed to a lesser version of the confirmed crime, he might be seen as attempting to make himself look better, or less culpable, which has a clear ulterior motive, and would result in the juror upholding the confession. Contrary to these hypotheses, no discounting was applied to confessions where the suspect appeared to be making his case worse by admitting to a more severe version of the crime, in comparison to a confession in which the suspect confessed fully and without error. While this finding speaks to the overall believability of confession evidence, and that jurors will simply accept any confession as true, results of the better (i.e. decreased crime severity) confession provide interesting data for consideration. When factual errors acted to decrease crime severity, (thereby making the suspect look better) mock-jurors judged the suspect as more guilty of the crime than the suspect who admitted fully and accurately to the crime, effectively adding a punitive cost to perceived downplaying of the crime. Overall, we found that mock-jurors did notice confession inconsistencies, and

that some types of inconsistencies, in some circumstances, would influence judgments of suspect guilt.

While chapters 2 and 3 focused on situational factors that might account for the variance in juror decision-making when presented with confession evidence, the papers described in chapters 4 and 5 were concerned with identifying dispositional factors that might interact with confession attributes to influence judgments of suspect guilt, with mixed success.

Need for cognition (NC) has been identified as a possible moderator in juror decision making, as it is concerned with inherent levels of motivation to engage in cognitively challenging tasks (Chapter 4). One reason posited for why jurors sometimes accept confession evidence that should have been rejected due to poor quality, is that jurors do not adequately scrutinize confession evidence, as they implicitly (and logically) believe it to be truthfully given. However, the naturally elevated motivation of high NC jurors should translate to an increased likelihood of engaging with the confession evidence more deeply and analytically, moderating any effect of confession inconsistencies on judgments of guilt. While previous research would generally agree that NC moderates juror decisions in some capacity, the current study and other studies using confession stimuli have not found this to be true. Across four experiments, we found no effect of need for cognition (measured on the 18-question Need for Cognition scale) on judgments of suspect guilt. We posit a number of reasons for this null finding, including the possibility that the motivation component of need for cognition does not adequately control for engagement levels in a trial where confession evidence is present.

However, while need for cognition failed as a dispositional factor contributing to juror variance in our study, we had considerable success with another juror attribute; that of attitudes toward coerced confessions (Chapter 5). Using the previously untested Attitudes

Toward Coerced Confessions scale (ATCC) we measured underlying support for coercive interrogation tactics and the belief that false confessions can be coerced from an innocent person. Findings showed the ATCC to be a valid measure of its two stated constructs (i.e. support for coercive interrogation, and belief in coerced confessions), and was reliably replicated in an experiment where coercion was manipulated within the confession. We found that the subscales of the ATCC could accurately predict which participants would, or would not, reduce their perception of suspect guilt when inconsistencies or coercion were present in the confession.

In summary, the present series of experiments adds to the literature on juror decision making by addressing the mechanisms underpinning the ways in which jurors process confession evidence. Our findings show that while jurors can discern confession inconsistencies, recognition of those inconsistencies only result in reduced judgments of guilt in certain circumstances. While need for cognition failed to account for any variance in juror decision making, one dispositional attribute that moderated judgments of suspect guilt was identified. The ATCC scale was able to successfully predict which individuals would ignore the coercive elements of a confession when deciding if a confession was reflective of true guilt, as well as those individuals who would be concerned by the inconsistencies in a confession and reduce their judgment of guilt accordingly.

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Chapter 1

Introduction

1.1 Overview

False confessions are a counter-intuitive phenomenon: Most people find it difficult to imagine a situation in which an innocent person would confess to a crime (Henkel, Coffman, & Dailey, 2008; Leo & Liu, 2009). However, false confessions appear with concerning frequency in wrongful conviction cases (e.g. Drizin & Leo, 2004), and the belief that they do not occur may, paradoxically, contribute to their powerful influence on juror decisions.

One important issue regarding false confessions is that jurors might be overly accepting of confession evidence, and not scrutinize confession evidence in the same way that they would other types of evidence such as eyewitness testimony (Malloy & Lamb, 2010). Yet, not all evidence points to an unthinking acceptance of confession evidence by jurors. Emerging research suggests that jurors might be more aware of the problems in confession evidence than given credit for (Henderson & Levett, 2016; Palmer, Button, Barnett, & Brewer, 2016; Woestehoff & Meissner, 2016). For example, Palmer et al. found a reduced propensity to render a guilty verdict when jurors were presented with a factually incorrect confession statement.

The research described in this thesis is concerned with the ways in which the presentation of evidence, and individual difference factors contribute to juror processing of confession evidence, particularly when that evidence contains inconsistencies that may indicate a false confession. Our first aim is to identify the circumstances under which jurors are better able to discern inconsistent testimony. Our second aim is to investigate whether juror characteristics moderate the effect of confession attributes on judgments of guilt. That is, can we predict whether the juror will be concerned by inconsistencies in confession evidence, rather than simply accepting the confession at face value?

1.2 False Confessions

Since the introduction of DNA testing, more than 350 people have been exonerated ("Innocence Project," 2017), with retrospectively-tested DNA evidence proving them innocent of their convicted crime. According to Innocence Project statistics, these wrongful convictions are predominantly attributed to eyewitness misidentification (approximately 75%), and false confessions (approximately 27%) (note that percentages do not add to 100% because wrongful convictions may have multiple causes). It is relatively easy to rationalize how an eyewitness could identify an innocent person, while being confident that they were correct. People generally understand that memory is fallible, and may well be able to relate to the experience of being certain of a particular memory, only to be proven wrong later. False confessions are not a phenomena to which people can easily relate: Individuals generally have difficulty imagining a situation in which they would falsely confess. This problem is compounded by the logical fact that the innocent suspect knows that they are innocent, making it hard for an observer to understand why they did not simply hold out, safe in the knowledge that there would be no evidence to prove their guilt. While we are all highly likely to have a moment where our certainty in our memory is shaken, we are unlikely to ever be in a situation where we falsely confess to murder, and have difficulty imagining ourselves in that situation. It is not surprising, then, that confessions are so readily accepted by jurors (e.g. Garrett, 2010), while other types of evidence, such as eyewitness testimony, are held to a higher standard (e.g. Malloy & Lamb, 2010; Palmer, Button, Barnett, & Brewer, 2016).

The regularity with which false confessions appear in wrongful conviction cases runs counter to the idea that people will not act in ways that cause them unnecessary hardship. With no apparent benefit to a person falsely confessing to a crime they did not commit, it is unsurprising that people in general have difficulty believing that false confessions occur.

Yet, the existence of false confessions is partly a testament to our self-serving nature, in that an innocent suspect will attempt to make the best out of a bad situation and confess in order to cease the interrogation and begin the process of clearing their name. This is most clearly illustrated in the differentiation between different types of false confessions.

Kassin and Wrightsman (1985) identified three types of confessions, categorised by their voluntariness (voluntary vs coerced), and whether the confessor maintains their belief in their innocence during the confession (coerced-compliant vs coerced-internalized). The voluntary false confession is where a person simply confesses to a crime without prompting, motivated by the delusional belief that they are guilty, or the misguided desire for notoriety. The 1947 murder of *Black Dahlia* actress Elisabeth Short attracted no less than 50 would-be confessors, willing to accept the consequences of admitting to such a high-profile murder (Kassin, 2008). The motivation for people who give voluntary confessions is relatively easy to understand and detect, with serial confessors appearing each time a new crime hits the news–such as Henry Lee Lucas who was said to have falsely confessed to more than 600 murders (Gudjonsson, 1999).

Coerced confessions, however, are not as simple to rationalize, or detect. In the case of coerced-internalized confessions, suspects start with the understanding that they are innocent, through the pressures of interrogation they come to believe that their memory is faulty, that the police are telling the truth, and that they have indeed committed the crime (Garrett, 2010; Kassin, 2008; Leo & Drizin, 2010). Garrett (2010) describes the case of William Kelly who became convinced that the police were telling the truth about his role in a murder and that he must have blacked out, causing his lack of memory for the crime. His internalization of the guilt led to confabulating details of the crime based on information gleaned from police. Coerced-internalized confessions, such as Kelly's, are a direct product of coercive interrogation techniques designed to elicit confessions using tactics such as false

evidence as 'proof' of the suspect's guilt, and unrelenting statements about the surety of the suspect's guilt. Certain groups of individuals are more susceptible to internalize the guilt of the crime under these circumstances, including unrepresented minors, and those with mental illness (such as William Kelly), or reduced mental capacity (Kassin, 1997). Under pressure of investigation, the innocent suspect loses sight of their innocence, and may take a period of time after confessing to understand that their feelings of guilt were due to coercion rather than culpability. On such case was that of 14-year old Michael Crowe, who was convinced by the police that he had murdered his 12-year old sister (Kassin, 2008), despite having no motivation to commit, or memory of, the crime. In adulthood, Crowe voiced the concern that, had the real perpetrator not been found, he might well still be convinced that he had murdered his sister.

The same interrogation techniques that result in a misplaced internalized belief of guilt can also result in a coerced-compliant confession, where the innocent suspect is brow-beaten into confessing, while maintaining the knowledge of their innocence. The use of deceptive and coercive interrogation tactics does not result in the suspect internalizing the guilt of the crime, but creates a feeling of helplessness that leads to the suspect believing that confessing is the only way to start the process of proving their innocence. An extreme example of situational pressures resulting in a coerced-compliant confession is that of Linda Stangel, described by Leo and Ofshe (1998). Accused of pushing her boyfriend from a cliff, Stangel was pressured into confessing on the narrow walkway of the clifftop, where the police had chosen to conduct the interrogation, knowing that she was terrified of heights. Prior to the confession, Stangel had steadfastly maintained her innocence, and afterwards stated that her confession was only to stop the interrogation and get off the cliff. The case of Linda Stangel is a reminder that non-violent coercive techniques can be incredibly effective in eliciting false confessions, and an illustration of how invisible such coercive tactics would

likely be to a jury, who often simply hear the confession, without mention of the surrounding circumstances.

1.3 Interrogation techniques

One reason why jurors have such difficulty understanding that false confessions can and do occur, is that they do not understand the processes of police interrogation, and the ways in which police officers are specifically trained in some countries to manipulate suspects to elicit confessions. It should be noted that police interrogations are different to police interviews in structure and purpose. While interviews are a fact-finding exercise, interrogations are performed on suspects that the police have determined are guilty of the crime, and are used to gain confessions. Some models of police interviewing do not move beyond the information-gathering stage (e.g., the PEACE model), with little distinction in questioning style between witness, victim, or suspect. Other models (e.g., the Reid technique) use the interview phase to make a preliminary assessment of likely guilt, based on verbal and non-verbal cues. If the police form the belief that the individual is guilty, the interactions move from information-gathering to extracting a confession, via nine prescribed interrogation techniques. The initial concern with the post-interview process outlined in the Reid technique, is that by viewing the suspect through the lens of certain guilt, all responses, denials, and behavior are attributed to a guilty person who does not want to admit their guilt (Leo & Drizin, 2010). Assumed guilt then pre-disposes police to reject the possibility that the denials are that of an innocent person who they have incorrectly categorised as guilty.

Another concern of guilt-presumptive interrogations is that the only acceptable outcome is a confession, and the interrogating officer is able to use any legal means at their disposal to achieve this. Although the ‘third degree’ (i.e., threat of, and actual physical harm) is no longer permitted to gain a confession, the range of permissible, non-physical, coercive interrogation techniques allow levels of psychological torture to achieve the same end: a

confession (Ofshe & Leo, 1997). Coercive interrogation techniques start from a foundation of suspect vulnerability, isolating them both physically and from their legal support mechanisms (i.e., a defence attorney), and subjecting them to lengthy interrogations. The isolated suspect is then subject to the coercive tactics of alternately minimizing and maximizing the severity and consequences of the crime, and bluffing the suspect into believing that there is physical evidence against them. Minimization is particularly problematic, as the police officer's quiet reassurance that the crime was not as bad as it seemed, and that it was not the suspect's fault, while offering an alternate face-saving excuse for the suspect's supposed actions, seems relatively harmless. Yet, minimization is remarkably effective at encouraging innocent people to confess by implying that a confession will result in leniency (Horgan, Russano, Meissner, & Evans, 2012; Russano, Meissner, Narchet, & Kassin, 2005), without crossing the legal boundaries into explicitly offering a reduced penalty in turn for the confession. While previous research has indicated that jurors are sensitive to, but dismissive of, the issue of coerced confessions (Kassin & Sukel, 1997), recent research findings suggest that jurors are more inclined to view techniques such as minimization increasing the likelihood of false confessions (Horgan et al., 2012), and reduce their belief in suspect guilt accordingly (Woestehoff & Meissner, 2016).

In the same way that lenience can be implied but not offered, false evidence ploys (that only imply that evidence exists against the suspect) are legally acceptable in some countries, but not others (Woody, Forrest, & Yendra, 2014). Unfortunately, research has shown that jurors are unable to distinguish between explicit and implicit false evidence ploys, and that jurors are equally deceived by both (Woody et al., 2014), providing no safeguard for the innocent suspect if they have been bluffed into confessing. While evidence cannot be physically fabricated, some police are able to bluff that they may have evidence against a person in order to induce a confession (e.g., dropping a large manila folder of 'evidence' on

the table, without revealing that it is full of plain paper). The effectiveness of the bluff technique illustrates what Kassin (2012) calls the 'innocence paradox', in which innocence itself becomes a contributing factor in the confession. In the bluff, the police imply that objective evidence of the innocent suspect's guilt has been obtained. The paradox is that the innocent person knows that the evidence cannot prove them guilty and latches on to it as a way of clearing their name. In confessing, the innocent person believes that they can cease the interrogation, and move on to proving their innocence using the evidence they know cannot be linked to them.

1.4 Juror perception of confession evidence

Unsurprisingly, confessions are convincing to jurors. It is not difficult to imagine that a juror would conclude that a suspect is guilty of the crime they confessed to, especially when confirmed by scientifically-verified inculpatory evidence, such as fingerprint analysis. However, while the judge decides admissibility of confession evidence based on whether the confession was elicited legally or not, part of a juror's role is to decide whether confessions deemed admissible are a valid indication of a suspect's guilt. In short, while the interrogation process might adhere to legal requirements (making the confession admissible as evidence in court), the reliability of the confession might be in question due to the manipulation of the suspect in legal, but ethically– and psychologically– dubious ways. Each juror must decide whether the confession is a reliable enough piece of evidence on which to base their verdict decision. Unfortunately for innocent suspects, false confessions cannot be detected as accurately as some jurors might believe.

The following sections discuss some of the problems jurors face when evaluating confession evidence, and some of the broader mechanisms through which false confessions can contribute to miscarriages of justice.

1.4.1 Evaluating confession evidence

Unfounded beliefs in the ability of police, and people in general, to detect deception can cause problems when considering false confession evidence. Police (in some countries but not others) are reassured that their training allows them to accurately detect deception through observation of verbal and non-verbal cues (resulting in the guilt-presumptive questioning discussed earlier) (Reid & Inbau, 2011). While the popular Reid Behavior Analysis Interview is marketed as training officers to detect truth from lies with 85% accuracy, research shows that officers are only able to detect 72% of lies in high-stakes situations (Wright Whelan, Wagstaff, & Wheatcroft, 2015). While high-stakes, real-life situations also prompt fairly high detection rates in civilians (68%) (Wright Whelan et al., 2015), in low-stakes situations civilians perform no better than chance (54%) (Bond & DePaulo, 2006). However, when judging the veracity of confession evidence, other studies have shown civilians to outperform trained police officers. Kassin, Meissner, and Norwick (2005) tested whether students or police investigators would more accurately determine which confessions (recorded by inmates) were true and which were false. Police officers were less accurate than the students, but more confident in their judgments, and were more likely to judge confessors as guilty. These findings indicate that jurors may have misplaced faith in the ability for police officers to have charged the correct person in the first instance, and that this has carry-on effects when guilt-presumptive interrogation leads to a confession.

1.4.2 Content of false confessions

To add to the difficulty in detecting and rejecting a false confession, research has shown that false confessions often contain the kind of richly detailed narrative that might only be expected from someone who had witnessed the crime first-hand (Garrett, 2010). While police officers are cognizant of the need to refrain from leaking information to the suspect in order to maintain the informational validity of the confession, the number of false

confession cases in which the suspect was able to give information known only to the real perpetrator or police, would indicate that police do not always keep the known facts as confidential as they should (Garrett, 2010). Appelby, Hasel, and Kassin (2013) analyzed 20 false confessions and found that all confessions covered the basic facts of the crime (e.g., location, time) as well as describing visual details, and referencing the victim and their behavior. They also found that the examined false confessions commonly contained references to how the suspect felt at the time of the crime, their motives for committing the crime, and sometimes remorse for their actions. Increasing the detail of a confession not only renders it indistinguishable from a true confession, but also increases the likelihood of conviction. Research has found that jurors are more convinced that a person is guilty of the crime if their confession elaborates upon how the crime was committed, and why they committed the crime (Appleby et al., 2013).

1.4.3 Contamination of other evidence

Once the police obtain a confession, investigation generally ceases, under the false assumption that they have apprehended the correct suspect. While other evidence gathered in the course of the investigation should remain independent of the confession, confessions have the propensity to contaminate supposedly independent evidence and skew that evidence towards "proving" the guilt of the suspect. This 'snowballing bias effect' (Edmond, Tangen, Searston, & Dror, 2015) sees perceptions of previously ambiguous or exculpatory evidence changed to implicate the suspect once knowledge of the confession is made available, creating 'corroboration inflation' (Kassin, 2012). For example, a detective who sends fingerprints to be analyzed, might mention to the analyst that the prints belong to the suspect that confessed, rather than simply asking for the prints to be analyzed and compared to the evidence. This simple act then increases the likelihood of the fingerprints being attributed to the suspect (Kassin, Dror, & Kukucka, 2013), providing further 'proof' of the veracity of

their confession. The conscious or unconscious alteration of evidence to fit with external information, brings into question the presumption that all evidence is independent of, and unaffected by, other evidence. By tainting other evidence, the false confession facilitates a sense of evidentiary corroboration that would not have existed without the confession.

In order to test the evidentiary independence of confessions, Hasel and Kassin (2009) staged a theft and then asked participants to identify an assailant from a lineup (in which the actual thief was not present). They later told participants that a different person in the lineup had confessed to committing the crime, resulting in 61% of participants rejecting their initial identification and making a new identification. Of those participants who did not identify a thief from the initial lineup, 50% confirmed the specified suspect as the thief when told that he had confessed to the crime. The results show the ease with which previously exculpatory evidence can turn into, or corroborate, inculpatory evidence, and also how invisible this process would be to a juror. Corroboration inflation is not isolated to lay evidence (e.g., evidence obtained from non-experts or victim/witness evidence). Expert testimony is also vulnerable to the effect of 'forensic confirmation bias' (Kassin et al., 2013), where expert evidence is altered due to knowledge about the case that is not required for the purpose of the analysis, such as whether a tested sample came from the person who confessed to the crime (Kassin et al., 2013).

1.5 The role of suspicion

A number of theories can be used to understand variability in juror decision making and have formed the theoretical basis for the current series of studies. While some models are specific to the forensic setting, such as the *Story Model of juror decision making* (Pennington & Hastie, 1992), other general social psychological theories can be applied to juror decisions, such as *correspondence bias* and *attribution theory* (e.g. Fein et al., 1990; Jones & Davis, 1965; Kelley, 1973; see Kassin, 2012 for a discussion).

Research by Fein et al. (1990) on the construct of suspicion (an extension of attribution theory by Kelley, 1973) provides a useful framework for understanding how jurors might process confession evidence (Palmer et al., 2016; Woestehoff & Meissner, 2016), and forms an important part of the rationale for the thesis (discussed further in future chapters). Fein's research has shown that suspicion may be a key driver in reducing the automatic acceptance of confession evidence. For example, jurors who adopted a suspicious mindset are more thoughtful about evidence than jurors who made decisions based on the assumed truthfulness of the confession (Fein et al., 1990). Accordingly, a person engaged in suspicious thinking is compelled to question hidden motives behind a behavior, prompting them to search for alternate reasons for that behavior (Fein, 1996; Fein et al., 1990; Fein, McCloskey, & Tomlinson, 1997). In this way, increasing suspicion may be a useful tool when investigating how confession evidence is processed, and how to encourage jurors to think critically about confession evidence rather than accepting it on face value.

Inconsistencies should prompt the juror to engage with the evidence more closely and to try to consider the reasons why the inconsistencies might have occurred. Critically, however, suspicion will only translate to reduced guilt judgments if the juror is able to generate a plausible alternate explanation for why the suspect has confessed (i.e., a reason other than guilt) (as per Fein's suspicion framework, 1990). If the juror is able to think of an alternate reason for the confession, they will be less likely to give a guilty verdict. However, if the juror is unable to think of a reason why the suspect has confessed then they will default back to a guilty verdict, regardless of their suspicion about the veracity of the confession. Therefore, in this framework, generation of a plausible alternate explanation acts as the key mechanism in changing verdict outcomes, in that inconsistencies in confession evidence will reduce judgments of guilt to the extent that they prompt jurors to think of alternate explanations for why the suspect might have confessed.

1.6 Methodological considerations

There are a number of methodological considerations when investigating juror decisions, some of which are considered here. The common thread is that of ecological validity. First, whether or not ecological validity is essential, non-essential, or detrimental to the research question. Second, is the choice of stimulus materials and the justification for using one type of materials over another (i.e., interview transcripts vs confession statements), and how this relates to materials that jurors in real cases would receive. The final consideration addressed is that of measures, and how they are combined to present meaningful findings that reflect pre-deliberation beliefs about suspect guilt.

1.6.1 Ecological validity or mundane realism?

A common criticism of mock-juror studies is that they are not ecologically valid enough to apply findings to real cases, and that no laboratory could hope to replicate the complexity of an actual court case. However, it is important to consider the difference between the face validity provided by mundane realism, and the ecological validity that can be provided by a laboratory-based task that appropriately assesses the applied construct. From a face validity perspective, it would be ideal to conduct a realistic mock-court case, to fully replicate the complexities of setting and evidence. However, such time and resources are rarely accessible, and may act to hinder the isolation of the variable under investigation. For example, in the current work, we are concerned with understanding the cognitive processes that precede and underlie decision making when faced with inconsistent confession evidence. In order to isolate the effect of confession inconsistencies, it is more important to remove as much 'noise' as possible by not including other possible confounds, such as full trial-evidence or video-recorded legal arguments, as they would increase mundane realism, but hinder ecological validity. The future aim is to test the effect of this particular variable, and then see whether that effect remains in increasingly varied and complex situations.

However, we do acknowledge that a level of realism can help participants get into the mindset of thinking like a juror. As such, the materials used in the studies described in this thesis aim for a level of realism that is appropriate to the aims of the task–such as making confession evidence appear to be from an actual police file, complete with signatures, redacted words, and pro-forma templates from fictional police departments.

1.6.2 Stimulus materials

Although mock-juror studies of confessions have often use simple typed confession statements to assess juror beliefs of guilt, and such statements might well be presented in court, the widespread practice of video and audio recording confessions increases the likelihood that jurors will see evidence of the interrogation leading to the confession, rather than just the confession statement itself (Kassin et al., 2010).

The use of an interview transcript rather than a simple confession statement also provides a more realistic test of the effects of inconsistencies on judgments of guilt. The simple typed confession in the form of *"on this day I took part in this crime"* type narrative used in the Palmer et al. (2016) study (where factual errors reduced guilty verdicts) may have exaggerated the inconsistencies between the single-page typed confession statement and the similarly brief police fact sheet due to their brevity. Additionally, by spreading the inconsistencies over a longer period in an interview transcript they become less obvious, with mock jurors required to be both observant and sufficiently concerned about the inconsistencies for them to elicit any influence over their verdict decision. Given the apparent propensity of jurors to simply accept that a confession is true and not investigate discrepancies with due care, the increased difficulty inherent in checking inconsistencies across different parts of stimuli will provide a more stringent test of the effects of inconsistencies on judgments of guilt, and improve the ecological validity of the results, allowing better generalisation to real-world cases.

With a simple statement, there is no capacity to see the back and forth that might have occurred prior to the story being told 'right' and with the correct amount of factually correct crime scene information. The lack of clear details and factual accuracy are even less evident when a simple statement of confession is constructed in a collaboration between the suspect and the police, where all evidence of negotiation over the facts is pared down to a statement of guilt. For example, if the suspect responds, *"black"* to a question about the color of electrical tape used in an attack, and then changes their answer to *"red"* after being asked, *"Are you sure it wasn't red?",* the reader can see that the suspect may have been led to produce the correct response. However, in the resulting typed confession statement, the juror would simply read, *"I used red electrical tape to…"*, giving the impression that the suspect provided factually correct information to the officer without clarification or amendment. By including a transcript of the interview in the stimulus materials, the use of coercive tactics should be more transparent than they would have been in a typed statement of confession, allowing the reader to make a connection between the use of coercion and the presence of inconsistencies in the confession. This approach is important in activating the construct of suspicion in that, if police coercion is made visible to a juror, they may take into account the influence of this otherwise hidden external pressure on a suspect when they have reasonable grounds to believe that the suspect confessed for some reason other than having committed the crime.

1.6.3 Scalar variables

Empirical evidence shows that even confessions of low quality tend to be compelling. For example, confessions are not discounted even when they are coerced and later retracted (e.g., Kassin & Sukel, 1997; Kassin & Wrightsman, 1980) or when the suspect is described as psychologically ill (Henkel, 2008). Further, case studies show that convictions are sometimes based on confessions that contain glaring errors about details of the crime (e.g.,

Earl Washington, who admitted to stabbing a victim 2-3 times when she actually received 38 stab wounds). Therefore, dichotomous (guilty/not guilty) verdicts are unlikely to reveal any subtlety underlying that decision. That is, although research says that 80% of juries are likely to accept any confession as evidence of guilt (Drizin & Leo, 2004), we are predominantly interested in the strength of their belief in the suspect's guilt. For example, a juror's automatic belief in the confession ('*they confessed so they must have done it'*), may be adjusted to something more circumspect when taking into account inconsistencies in the confession ('*I still think they did it, but I don't understand why this doesn't match the crime scene facts')*, or upon seeing evidence that the police used coercion ('*I still think they did it, but the police didn't given them much choice other than to confess'*). In order to reveal this nuanced thinking, we used a protocol commonly used in juror-decisions research (see Appleby & Kassin, 2016; Leippe, Eisenstadt, Rauch, & Seib, 2004; Sauer, Palmer, & Brewer, 2017; Sommers & Kassin, 2001; Tenney, MacCoun, Spellman, & Hastie, 2007) in which dichotomous verdicts (guilty/not guilty) are combined with confidence in verdict score (*1 = no confidence* to *10 = total confidence*), to create a continuous variable called 'judgment of guilt'. The combined score then allows us to see whether the participant is entirely confidence that the suspect is guilty, entirely confident that the suspect is not guilty, or somewhere in between. The scores closest to zero indicate participants who had so little faith in their own verdict that they might well have chosen no verdict (had it been an option), or moved to the opposing verdict with little persuasion.

1.7 Aim of the Present Thesis and Outline of Chapters

The way in which jurors process confession evidence is an under-researched area of forensic psychology, as it is assumed that jurors simply accept all confessions, and the onus must therefore be on stopping false confessions from occurring in the first place. While some researchers have discussed the ways in which jurors are prone to ignoring confession

inconsistencies (Malloy & Lamb, 2010), emerging research has indicated that jurors might allocate more cognitive resources to scrutinizing confession evidence, and be less inclined to believe poor quality confessions, than previously thought (Henderson & Levett, 2016; Palmer et al., 2016; Woestehoff & Meissner, 2016).

The aim of this thesis is to present a cohesive series of studies that investigate how confessions influence perceptions of suspect guilt, with special focus on those circumstances in which jurors question the veracity of poor quality confessions, and the attributes that make jurors more likely to draw the distinction between acceptable and questionable confessions. To achieve this, the thesis is divided into two sections – one experimental, and one methodological. The studies described in Chapters 2 and 3 experimentally test how jurors process confession inconsistencies and how these inconsistencies then influence their judgment of suspect guilt. Chapters 4 and 5 also use experimental studies to test scales that measure the beliefs and behaviors of individuals that could influence juror decision making.

In Chapter 2, we first tested whether jurors were able to notice inconsistencies in a confession, as the overriding belief that all confessions are true might stop jurors from being able to recognize/detect that the confession contained inconsistencies. Second, we tested whether the type of inconsistency moderated any effect of inconsistency on jurors' perceptions of suspect guilt. Findings showed that jurors could perceive the consistency of a confession, but that inconsistencies only reduced judgments of guilt if the inconsistency took the form of a factual error (in which the suspect got key facts of the crime wrong in their confession). When the inconsistency took the form of contradictions (in which the suspect contradicted themselves throughout their confession), there was no reduction in the perception of suspect guilt in comparison to a confession that contained no contradictions.

The following article has been submitted and a revised version is under review:

Holt, G. A., & Palmer, M. A. *The variable influence of confession inconsistencies*.

The findings from the publication described in Chapter 2, led to the experimental research described in the publication comprising **Chapter 3**. This publication further breaks down the effect of factual errors on judgments of guilt, by testing whether the direction of the errors contributes to the effect. That is, do errors that increase the severity of the crime (those that appear to make the suspect look worse), have a differential effect to those errors that appear to decrease the severity of the crime (those that make the suspect look better). Findings showed that inconsistencies in general acted to reduce judgments of guilt through the mediating variable of perceived confession consistency. However, if jurors perceived that the suspect might be deliberately getting the facts of the crime wrong in a way that appeared to reduce crime severity, then they were more likely to perceive the suspect as guilty of the crime. This exploratory finding has the potential to explain a portion of the variance in the effect of inconsistencies on juror perceptions of suspect guilt (i.e., why jurors sometimes convict based on factually incorrect confessions, and sometimes reject them).

The following article has been submitted for peer review:

Holt, G. A., & Palmer, M. A. *Directional errors in confessions: Comparing the effects of under– and overstating crime severity*

Chapter 4 is a methodological paper, testing the suggestion that some jurors will scrutinize evidence to a greater degree than others because of an innate inclination to engage with cognitively challenging tasks, measured using the well-known Need for Cognition scale. Previous research has linked scores on the Need for Cognition scale to juror decision making, but none have specifically investigated whether juror processing of inconsistent confession evidence is moderated by a juror's self-reported need for cognition.

This publication is in preparation for future submission:

Holt, G. A., & Palmer, M. A. *Need for Cognition and juror processing of inconsistent confessions.*

Chapter 5 tested a published, but previously untested scale that purported to identify individuals who supported coercive interrogation techniques, as well as those who believed that confessions could be coerced from an innocent suspect. Participants were presented with a confession interview transcript, similar to those used in Chapters 2 and 3 where a suspect confessed to a physical assault charge. In addition to completing questions about belief in suspect guilt, participants completed the *Attitudes Toward Coerced Confessions* scale (Clark, Boccaccini, & Turner, 2010). Findings showed that the scale could accurately predict which participants would be unconcerned by coercive interrogation techniques when judging guilt, and those who would have reduced perceptions of suspect guilt when the suspect gave an inconsistent confession that could be indicative of innocence.

The following article has been submitted for peer review:

Holt, G. A., & Palmer, M. A. *The predictive validity of the Attitudes Toward Coerced Confessions scale*

Together, these four chapters contribute to our theoretical understanding of why jurors make differential decisions based on inconsistent confession evidence, while providing a methodological understanding of how we can better predict and test individual factors that contribute to judgments of suspect guilt.

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Chapter 2

The variable influence of confession inconsistencies

2.1 Abstract

Purpose: Wrongful conviction statistics suggest that jurors pay little heed to the quality of confession evidence when making verdict decisions. However, recent research indicates that, in some circumstances, confession inconsistencies may act to reduce guilty verdicts. In two studies we investigated if different types of confession inconsistencies (contradictions, factual errors) had differential effects on judgments of guilt.

Method: Two pen-and-paper mock-juror studies tested how individual jurors judged a suspect's guilt after reading the suspect's inconsistent confession to an assault. In Experiment 1, confession inconsistencies took the form of contradictions, with the suspect changing his story from a previous statement. In Experiment 2 the suspect made statements about the crime that could be proven factually incorrect from other evidence.

Results: In Experiment 1, the contradictory and consistent confessions attracted similarly high judgment of guilt ratings, with no significant difference between the groups. However, Experiment 2 showed that when inconsistencies took the form of factual errors, judgments of guilt were significantly reduced in comparison to a consistent confession.

Conclusions: The results of the present studies indicate that not all confession inconsistencies are treated equally, and that a factual error in a confession might cause a juror to be suspicious about the veracity of the confession, while a contradiction will not. The mechanism behind this effect appears to be the ability of the juror to not only generate other reasons why the suspect might have confessed if not guilty, but how plausible they believe a single one of those generated reasons to be.

2.2 Introduction

Pedro Hernandez was convicted in 2017 for the 1979 murder of six-year-old Etan Patz. However, an earlier hearing of this case was declared a mistrial after that jury was unable to reach a verdict because a single juror was not convinced of Hernandez' guilt due to his inconsistent confession. These events illustrate the point that most jurors find confession evidence highly persuasive of guilt even when the confession contains inconsistencies (Malloy and Lamb, 2010). However, the refusal of a juror to convict based on inconsistent confession evidence also highlights the idea—emerging in recent research—that some jurors are able to evaluate confession evidence more objectively than previously thought (Henderson & Levett, 2016; Palmer et al., 2016; Woestehoff & Meissner, 2016). The current research investigated the conditions under which inconsistencies in confession evidence prompt jurors to find confessions less compelling.

While an inconsistent confession is no guarantee that the person is innocent, false confessions are surprisingly common, despite their counter-intuitive nature. Although difficult to imagine why a person would confess to a crime they did not commit, statistics show that people falsely confess at rates more frequent than common sense might indicate. Approximately one quarter of wrongful convictions overturned by DNA evidence have been attributed, at least partly, to an innocent person falsely confessing their involvement in the crime ("Innocence Project" 2017). These numbers highlight two important issues. The first relates to why people falsely confess. A large body of research has identified interrogation tactics that pressure confessions from guilty and innocent suspects alike (e.g. Leo, 2008; Kassin, 2008), such as lengthy interrogations (Leo, 2008), and using false evidence (Kassin, 2008). This research has led to important recommendations for policies to reduce the likelihood of false confessions occurring (e.g. Kassin et al., 2010). However, the widespread use of pressurised interrogation techniques that increase the likelihood of false confessions—

such as the Reid technique (Kassin, 2008)—suggests that false confessions will continue to be presented in court. Hence, it is crucial to understand how jurors process confession evidence in order to determine the conditions under which false confessions are likely to translate to guilty verdicts.

2.3 The power of confession evidence

Confessions make for compelling evidence, being described as the most powerful piece of courtroom testimony due to an increased likelihood of securing a conviction (Kassin & Neumann, 1997). A confession can be used to press charges in the absence of any other evidence, and can result in otherwise contradictory evidence being glossed over or ignored completely. The persuasive capacity of confessions, and why they hold such power in court, relates to beliefs about how and why people confess. Logically, people believe that a person confesses because they are guilty (Henkel et al., 2008; Kassin et al., 2010). Given the negative consequences of confessing to a crime, it can be difficult to imagine a plausible alternate reason as to why a person would confess if not guilty. Leo and Ofshe (1998) describe this phenomenon as the *myth of psychological interrogation*, being the belief that a person of sound mind would not confess to a crime they did not commit, unless physically tortured. This implies that jurors who subscribe to this myth cannot imagine a reason (other than guilt) as to why a suspect would confess. Therefore, such jurors would accept a confession at face value, with variations in confession quality attributed to reasons other than a lack of complicity in the crime. This notion is supported by the results of numerous studies, including striking demonstrations that jurors are willing to convict based on a confession even when the confession was coerced (Kassin & Wrightsman, 1981), was provided by an informant with incentive to lie (Neuschatz, Lawson, Swanner, Meissner, & Neuschatz, 2008), or in the presence of exclusionary DNA evidence (Appleby & Kassin, 2016).

One reason why jurors might not reject false confession evidence relates to the level of scrutiny afforded to confessions, in contrast to other types of evidence. There is some evidence that because jurors tend to take confessions at face value, they do not treat confession evidence with the same level of scepticism and scrutiny as they would when looking at the quality of, and motivations behind, witness or victim testimony (Malloy & Lamb, 2010; Palmer et al., 2016; Redlich, Ghetti, & Quas, 2008; Woestehoff & Meissner, 2016). In an overview of the way in which jurors process different evidence types, Malloy and Lamb (2010) observed that when examining confession evidence, jurors will often ignore the same type of inconsistencies that would have caused them to dismiss witness testimony as lacking credibility and reliability. The disparity may be due to the difficulty understanding the motivations behind a false confession, while the motivations for an eyewitness to provide false testimony are easier to comprehend, such as lying about what they saw for their own gain.

Some well-known cases provide evidence that jurors will accept confessions that are substantially flawed. In 1989, five young men were coerced into falsely confessing to the sexual assault of a female jogger in Central Park. Despite DNA evidence that excluded them from involvement in the crime, they were convicted by the jury based on confessions that were inconsistent with the facts of the crime and with each other. Retrospective testing in 2002 revealed the DNA profile of a single suspect, with the five men cleared of any involvement in the crime (Garrett, 2010). That the jury were willing to reject the initial DNA evidence, and accept multiple inconsistent confessions, suggests that the quality and consistency of a confession may be less important than the simple existence of the confession itself.

However, recent research by Palmer et al. (2016) suggests that jurors pay more attention to confession inconsistencies than wrongful conviction statistics might suggest.

Participants in their mock juror study read materials that included a confession statement of a suspect admitting to armed robbery. The confession was either factually consistent or inconsistent with the facts of the crime, and participants were either provided with an alternate reason why the suspect might have confessed (police coercion, to protect someone), or no alternative reason was provided. Results showed that participants who read a confession statement inconsistent with the facts of the crime were less likely to give a guilty verdict than those who read a confession statement that factually matched information about the crime. This result was found whether or not a plausible alternate explanation for the suspect's confession was made salient to the juror. These findings indicate that some circumstances may motivate jurors to generate their own reason why the suspect has confessed, despite the general belief that jurors fail to scrutinise confession veracity.

While wrongful conviction cases, and some studies (Malloy & Lamb, 2010) indicate that confession inconsistencies can go unnoticed by jurors, it is clear this is not always the case (Palmer et al., 2016). The focus of this research is on investigating some of the conditions that determine when—and how—inconsistencies affect judgments of guilt.

2.3 Theoretical rationale

Previous research suggests that the likelihood of jurors generating alternative explanations for why a suspect confessed (other than because the suspect was guilty) may play an important role in explaining why inconsistencies in confessions reduce jurors' perceptions of guilt in some situations but not others (Palmer et al., 2016; Woestehoff & Meissner, 2016). One reason why confessions are extremely persuasive of guilt relates to the *correspondence bias* (e.g. Gilbert & Malone, 1995; Ross, 1977). Jurors tend to attribute confessions to internal factors (i.e., guilt) rather than external factors, such as situational pressures associated with police interrogations (e.g., Kassin, 2012; Woestehoff & Meissner, 2016). The correspondence bias is especially likely to affect jurors' processing of confessions

because it is exacerbated for behaviors that are not self-serving, such as confessing to a crime (e.g. Jones & Davis, 1965; Kassin, 2012; Kelley, 1973).

Crucially, observers are less likely to attribute behaviors to internal factors when there is a salient alternative explanation for the behavior (Fein, 1996; Fein et al., 1990; Fein, McCloskey, & Tomlinson, 1997; Kelley, 1973). Thus, if jurors are able to think of a plausible, alternative reason why a person has confessed (other than being guilty of the crime), they will be less likely to attribute the confession to guilt rather than some other cause (e.g., the suspect was protecting the real perpetrator, or was pressured by police to confess).

Based on this reasoning, we investigated whether the effect of inconsistencies on jurors' perceptions of guilt depends on the extent to which inconsistencies prompt jurors to generate a plausible alternative explanation for why the suspect confessed. We hypothesized that the generation of alternative explanations for the confession would mediate the effect of inconsistencies on judgments of guilt, such that the presence of inconsistencies would influence the generation of plausible alternative explanations for the confession, which in turn would reduce ratings of guilt.

In the context of this broad aim, we addressed two additional issues. First, we tested whether different types of confession inconsistencies (*contradictions* vs *factual errors*) differed in the extent to which they prompted jurors to generate alternate explanations and, hence, the extent to which they influenced judgments of guilt. Contradictions occur when the suspect seems to forget the facts of their own story, and has to correct themselves in order to keep the story coherent. These types of inconsistencies are in line with Brewer and Hupfeld's (2004) definition of the inconsistency being due to distraction rather than error. Factual errors involve the suspect making statements that are refuted by a piece of verified evidence, such as a police report of the facts of the crime, or photographs of the crime scene.

In two juror decision-making experiments, we compared consistent confession evidence with evidence containing either contradictions (Experiment 1), or factual errors (Experiment 2). Transcripts for the two experiments contained confession inconsistencies that focused around key aspects of the crime, including time and place, rather than peripheral aspects which jurors might see as inconsequential when deciding the suspect's guilt. If some types of inconsistencies are more likely to facilitate jurors' generation of alternate explanations, this could contribute to the variable effects of inconsistencies on the persuasiveness of confession evidence reported in the literature. For example, factual errors may indicate serious problems with the credibility of a story (e.g., "If the person was really there, surely they would not have got that detail wrong"), whereas contradictions might be viewed as natural irregularities in the confession story. If so, factual errors—but not contradictions—would increase the likelihood of jurors generating a plausible alternate explanation for the confession.

Second, we considered the specific mechanism by which the generation of alternative explanations might translate to differences in guilt ratings. One possibility is that this effect hinges on the number of alternative explanations generated. That is, the greater the number of reasons a juror can think of (other than guilt) for why the suspect confessed, the lower the perception of guilt. Another possibility is that the effect hinges not on the number of explanations generated, but on the subjective plausibility of the best alternative explanation. That is, regardless of how many alternative explanations a juror generates, judgments of guilt will depend on the extent to which at least one highly plausible explanation is generated. The greater the plausibility of the best explanation, the lower the perception of guilt.

To address this issue, we designed a task to measure (1) the number of alternative explanations jurors could generate for why the suspect confessed, and (2) the plausibility of the best alternative explanation they generated. After providing a verdict (guilty or not

guilty), participants were asked to list any other reasons why the suspect may have confessed (other than guilt). If the participant came up with at least one alternate explanation for the confession, they were asked to choose the most plausible of their explanations and rate its plausibility.

2.4 Experiment 1: Contradictions

Experiment 1 investigated whether inconsistencies in the form of contradictions would prompt jurors to generate alternate explanations for why a suspect confessed that would then, in turn, influence judgments of guilt. If contradictions in confession evidence increase the likelihood of generating a plausible alternate explanation, judgments of guilt should be reduced.

2.4.1 Method

Participants. Seventy-three participants (53 female) were recruited from undergraduate psychology courses in return for partial course credit. Participant ages ranged from 18 to 60 years (M = 27.47, SD = 11.17), and were either reimbursed $15, or received partial course credit.

Design and procedure. Informed consent was obtained prior to random allocation of participants to one of two conditions (*consistent, contradictions*) of a between-groups design. Supervised testing took place in groups (n = 2-12) in a laboratory or classroom setting. After giving informed consent, participants read a confession interview transcript and then completed a pen-and-paper questionnaire, with instructions not to change their answers. Participants acted as individuals, rather than as a juror deliberation exercise. Testing took approximately 25 minutes.

Transcript. The stimulus material was a (fictional) transcript of a police interview in which a suspect confessed to a physical assault charge. A fact-finding police interview (as

per the PEACE model) was used in preference to an interrogation, which is used specifically to elicit a confession (see the Reid technique), to avoid introducing coercion as a possible confound. At the start of the interview, we learn that the suspect has previously spoken to the police, but that a new officer has taken over the case and wants to hear the story from the start. Consistency was manipulated by having the suspect contradict his own statement regarding key facts. The suspect seems unaware that he has contradicted his previous statement until the police officer points out the contradictions. The suspect then chooses which version of events he wishes to adhere to, without further prompting. For example, the suspect states that he entered the victim's house through an unlocked garage door. When the police officer asks if that agrees with his previous statement, the suspect responds, *"No, that's right. It was the other way round. I got into the house by the front door, but I left through the garage."* The transcript materials are available as Supporting Information online.

Measures. Participants were asked a number of case-related questions, including whether they found the suspect guilty or not guilty of the assault charge, and how confident they were in their verdict decision, from 1 ("*not at all confident"*) to 10 ("*totally confident"*). Verdict and verdict confidence were combined to form a new dependent variable, called judgment of guilt, following the method outlined by Tenney et al. (2007). A value of 0.5 was added to each confidence score, and the scores for "not guilty" verdicts were multiplied by -1 resulting in a range of scores from -9.5 (completely confident in a not guilty verdict) to 9.5 (completely confident in a guilty verdict), with the 0.5 difference reflecting that the original confidence scale ran from 1 to 10, rather than 0 to 10. For example, a guilty verdict with a confidence rating of 4 became a judgment of guilt of 3.5, while a not guilty verdict with a confidence rating of 8 became a judgment of guilt of -7.5.

We also analysed the data using the dichotomous verdict measures (*guilty* or *not guilty*) in both experiments. However, as the pattern of results was unaltered by using the

dichotomous measure, we chose to report the continuous judgment of guilt scores to provide a more nuanced understanding of how individuals view suspect guilt. This is especially relevant in this type of experiment, where the exact circumstances of a court case are not required to test the research question, and dichotomous verdicts cannot accurately reflect the strength of individual belief in suspect guilt.

Manipulation checks of consistency and coercion asked participants to rate on a 10-point scale how consistent they found the suspect's evidence (very inconsistent, to totally consistent), and how voluntary they believed the suspect's confession to be (totally involuntary, to totally voluntary). Demographic information included age, gender, languages spoken at home, and whether the participant was studying at university full or part-time.

Alternate explanations and plausibility ratings. The questionnaire included a measure of participants' ability to generate plausible alternate explanations for why the defendant confessed. This took part in two stages. First, participants were asked to imagine that the suspect was innocent of the confessed crime and list any reasons why the suspect might have confessed. For example, participant-generated explanations included, *"If he did something worse and was using this as an alibi"*, and *"Could be covering up for a mate or brother".* Second, participants were asked to rate their preferred alternate explanation (if they gave one) as to how convincing they thought that reason was in explaining why the suspect confessed (on a scale of 0% - *this reason is not at all convincing*, to 100% - *this reason is totally convincing*). The score from the favored explanation was used as a measure of the extent to which participants were able to generate a plausible alternate explanation (other than guilt) for why the suspect confessed. Participants who did not provide any alternate explanations were coded with a score of zero for this variable.

2.4.2 Results

Manipulation checks. The consistency manipulation check confirmed that participants were able to discern the inconsistencies in the confession transcript. Participants rated a *consistent* confession as significantly more consistent than a contradictory confession, t (66.93) = 9.71, p <.001, 95% CI [3.37, 5.11], d = 2.27. A manipulation check of perceived confession voluntariness showed little difference in perceived voluntariness between the *consistent* and *contradictions* conditions, t < 1, d =.07 (see Table 1 for means, standard deviations and 95% confidence intervals around the means for Experiment 1 measures).

Generation of alternate explanations. There was no significant difference in the number of alternate explanations generated between the *consistent* and *contradictions* conditions, t < 1, d = .17. Participants who read a consistent confession gave similar plausibility ratings for their favored alternate explanation to those who read a contradictory confession, t < 1, d = .12.

Judgments of guilt. An independent samples t-test revealed no effect of consistency on judgments of guilt, t < 1, d = 0.08. Participants in both conditions overwhelmingly judged the suspect to be guilty of the confessed crime (see Fig. 2).

Dichotomous verdicts of guilt. Overall, 90.4% of participants gave a guilty verdict. There was no significant difference in guilty verdicts between those in the *consistent* condition (93.5% guilty) and the *contradictions* condition (88.1% guilty), n = 73, χ^2 (1) = .612, p = *.43*.

2.4.3 Discussion

Experiment 1 results indicate that while jurors were aware of contradictions in a confession, these contradictions were not sufficient to reduce judgments of guilt. More specifically, jurors may perceive that the suspect is presenting a contradictory confession for

reasons other than innocence. For example, if the suspect changes their story, or stumbles over key facts, this may be interpreted as an understandable imperfection in the retelling of a story, rather than a problem suggestive of the suspect's innocence and subsequent fabrication of a confession to escape the pressure of interrogation.

2.5 Experiment 2: Factual Errors

Experiment 2 tested whether factual errors in a confession prompt witnesses to generate plausible alternate explanations for the confession and, in turn, reduce judgments of guilt.

2.5.1 Method

Participants and design. Eighty-nine participants (60 female) were recruited from undergraduate courses, and the wider university community. Participants were aged between 18 and 61 years (M = 27.19, SD = 10.44), and were either reimbursed $15, or received partial course credit.

Materials and procedure. Materials and procedure closely followed Experiment 1, with the addition of a police report that combined observed and forensic information. This allowed participants to compare the confession with the police evidence for accuracy. Informed consent was obtained prior to random allocation to one of two conditions (*consistent*, *factual errors*) of a between-groups design. Participants in the *consistent* condition read a confession transcript that matched the police report on all key facts. In the *factual errors* condition, the transcript deviated from the police report on five key facts: the time of the assault, location of injury, location where the assault took place, point of entry to the house, and location of the victim. The transcript and police report materials are available as Supporting Information online.

2.5.2 Results and discussion

Manipulation checks. Confession consistency was successfully manipulated, with participants rating a *consistent* confession rating as more consistent than a confession containing *factual errors*, t (75.343) = 10.00, $p < .001$, $d = 2.11$. There was no significant difference between conditions on the manipulation of voluntariness, t (87) = 1.30, $p = .197$, indicating that the manipulation did not inadvertently affect perceived voluntariness of the confession (see Table 2 for means, standard deviations and 95% confidence intervals around the means for Experiment 2 measures).

Dichotomous verdicts of guilt. Overall, 69.7% of participants gave a guilty verdict. Participants in the *factual errors* condition gave a significantly lower amount of guilty verdicts (51.1%), than those in the *consistent* condition (88.6%), $n = 89$, χ^2 (1) = 14.823, $p < .001$.

Generation of alternate explanations. The presence of factual errors affected belief in the plausibility of the favored alternate explanation, but not the number of alternate explanations generated. Participants in the *factual errors* condition expressed significantly higher belief in the plausibility of their favored alternate explanation than those in the *consistent* condition, t (87) = -2.27, $p = .025$, $d = .48$. However, there was no significant difference between conditions on the number of alternate explanations generated, t (87) = -.80, $p = .427$, $d = .17$.

Judgments of guilt. The effect of factual errors on the plausibility of the favored alternate explanation (e.g. that the suspect was covering for someone else) then translated into effects on judgments of guilt. An independent samples t-test revealed that participants who read a confession containing factual errors favored the suspect as significantly less guilty, than those who read a confession that was factually consistent with the police report, t

(77.21) = 4.15, $p < .001$, $d = 0.88$. We conducted a mediation analysis in order to investigate the mechanism by which confession inconsistency (in the form of factual errors) affected judgments of guilt. Mediation analysis, using PROCESS software (Hayes, 2013), confirmed that the effect of inconsistencies on judgments of guilt was partially mediated by the plausibility of the favored alternate explanation for the suspect's confession (see Fig. 1). The presence of factual errors increased ratings of the favored alternate explanation which, in turn, was associated with lower judgments of guilt, $B = -.047$, p=.021, CI 95% [-.09, -.01]. Most importantly, there was an indirect effect of inconsistency on judgments of guilt via differences in plausibility ($B = -.72$, [-2.22, -.064]), showing that consistency affected judgments of guilt by altering belief in the plausibility of the participant's favoured alternate explanation for the confession. The direct effect of inconsistency on judgments of guilt (controlling for plausibility of favored alternate explanations) was statistically significant, indicating partial mediation.

Crucially, while the plausibility rating of favored alternate explanations had a significant mediating effect on judgments of guilt, the number of alternate explanations generated did not, $B = -.17$, [-1.28, .12]. This indicates that the juror's belief in the suspect's guilt is not affected by the number of alternate explanations they can think of, but rather how strongly they believe that their favored alternate explanation (e.g. that the suspect was covering for someone else) can adequately explain why the suspect might have confessed in the absence of guilt.

2.6 General Discussion

In two experiments, we investigated whether individuals could discern the presence of confession inconsistencies (that may or may not indicate a false confession), and if these inconsistencies then influenced their judgment of the suspect's guilt. The results rule out two possible explanations as to why jurors often fail to reject false confessions. The first

explanation is that jurors make poor decisions based on low-quality evidence simply because they do not notice confession inconsistencies in the way that they would if the testimony was from an eyewitness. However, participants in both experiments were consistently able to discern the inconsistencies present in confession evidence, but treated the inconsistencies differently by type. While some inconsistencies were seen as indicators of a problematic confession (*factual errors*), others seem to have been disregarded as inconsequential (*contradictions*). The second explanation as to why a juror would accept a false confession is that they are incapable of imagining why an innocent person would confess to a crime they did not commit. However, our results showed that mock jurors are capable of generating alternate explanations for why the suspect might have confessed (e.g. that the suspect was covering for someone else), and then using those explanations to alter their internal narrative of the crime and belief in the suspect's guilt, dependant on how plausible they found one of those alternate reasons in explaining the confession inconsistencies.

This research applies social psychological theory to the important applied issue of false confessions in wrongful convictions. The findings contribute to frameworks for understanding how jurors process confession evidence by identifying an important mechanism underpinning the effects of inconsistencies, shaping our understanding of how and when confession inconsistencies influence judgments of suspect guilt. Specifically, our data suggest that a crucial mechanism by which errors in a confession reduce judgments of guilt is the extent to which the person judging guilt can generate a plausible explanation—other than guilt—for why the confession was made. For example, that the suspect confessed to cover for the person who actually committed the crime. When inconsistencies in confession evidence prompted mock jurors to generate alternate explanations (other than guilt) for why the suspect confessed, this translated to reduced perceptions of guilt.

Three corollaries accompany this point. First, different types of inconsistencies differ in the extent to which they are likely to prompt jurors to generate those alternate explanations for the confession. Factual errors prompted alternate explanation generation; contradictions did not. This variation in effects between different types of inconsistencies (see Fig. 2) likely contributes to the discrepancy in the literature regarding the effects of confession inconsistencies (Malloy & Lamb, 2010; Palmer et al., 2016). Second, the number of alternate explanations generated does not seem to matter. That is, regardless of how many alternate explanations were generated, the extent to which inconsistencies translate to reduced judgments of guilt depends on the generation of a single, plausible explanation. This implies that competing alternative explanations did not have additive effects on judgments of guilt. This finding may have implications for attribution-based theories of social judgment (e.g., Kelley, 1973; Fein et al., 1990). Finally, the effect of factual errors on judgments of guilt was only partially mediated by differences in the plausibility of favored alternate explanations for why the suspect confessed. This indicates that additional mechanisms contribute to the relationship between confession inconsistencies and judgments of guilt. Nevertheless, our results suggest that belief in a single alternate explanation plays an important role in explaining this relationship.

It should be noted that the aim of the methodology in present research was not to simulate the complexities of a real trial. Nor do we claim to account for all possible mechanisms that determine whether a juror will accept or reject an inconsistent confession. Rather, our purpose was to isolate one possible variable that might account for some of the variation in juror decisions about confession evidence. By removing the confession evidence from the noise of other trial evidence, we can test whether confession evidence alone holds the kind of courtroom power indicated by real cases. Much as the majority of cases where a defendant who confessed will be found guilty, participants in our study overwhelmingly

believed the suspect to be guilty, regardless of how inconsistently the confession was given. However, just like in real-life hung juries, we did find a number of individuals who were not prepared to convict the suspect based on a single, poor-quality piece of evidence. From this we can conclude that while inconsistencies might make people concerned about the veracity of the information presented, those concerns are not always translated to belief in suspect guilt. Unlike inconsistent eyewitness testimony, which might cause jurors to discount that evidence as unreliable, inconsistencies in confession evidence appear to have a smaller effect, but do have an effect all the same. Therefore, defence lawyers would be best placed to highlight confession inconsistencies to jurors, and explain how such inconsistencies might be viewed to reduce the weight they should give the confession evidence.

2.7 Limitations and future directions

The results of the present studies (specifically Experiment 2) run counter to wrongful conviction cases in which juries erroneously accepted a false confession as proof of guilt. One possible reason for the contrary findings is that the confession in our experiments was a multi-page interview transcript, allowing participants to see where inconsistencies arose and formulate hypotheses as to why the confession was inconsistent. In contrast, a typical single-page confession statement will preclude the juror from seeing any negotiation over factual details that might trigger their suspicion about the confession's veracity.

The more widespread use of video-recording of interrogations raises the possibility that jurors might be asked to evaluate increasingly detailed confession evidence. Although the present research used materials that were more complex and realistic than a simple confession statement, other materials that more closely mimic evidence presented in court, such as video-recordings or cross examination transcripts, would increase ecological validity. Similarly, with regards to a realistic level of trial complexity, our study involved jurors making judgments based on a single police interview, rather than multiple pieces of

competing evidence (e.g., opening statements; cross-examination) over a period of days. Future research might use the approach utilised in other studies (Fein, McCloskey, et al., 1997; Fein, Morgan, Norton, & Sommers, 1997) where suspicion raising and disambiguating evidence are sent separately to mock jurors over a period of time to create a more complex and realistic set of stimulus materials.

Despite some limitations, these studies contribute to existing research into how jurors might process confession evidence, by systematically investigating contradictory findings of the effects of inconsistencies in confession evidence on judgments of guilt (Malloy & Lamb, 2010; Palmer et al., 2016). In line with recent research by Woestehoff and Meissner (2016), the findings of the present studies paint an optimistic view that jurors can be discerning when evaluating confession evidence. Jurors are capable of scrutinizing confession evidence more closely than previously thought, however, not all types of inconsistencies will reduce perception of the suspect's guilt. Similar to Woestehoff and Meissner (2016), mock-jurors in our studies showed both the capacity to identify problematic confessions, and to imagine why an innocent person might confess in that situation. However, to sway judgments of guilt, solid evidence was required in the form of factual errors, with contradictions proving too inconsequential to be of influence. The promise of a discerning juror encourages continued investigation into the elements of confession evidence that might dissuade jurors from automatically accepting confessions, and making a more considered assessment of their evidentiary value.

Tables

Table 1

Means and standard deviations for Experiment 1 measures

	n	M *(SD)*	95% CI
Judgment of Guilt			
Consistent	31	5.83 *(3.75)*	4.45, 7.21
Contradictions	42	5.49 *(4.23)*	4.17, 6.81
Perception of Consistency *			
Consistent	29	7.94 *(1.50)*	7.37, 8.51
Contradictions	39	3.71 *(2.10)*	3.03, 4.38
Perception of Voluntariness			
Consistent	31	7.06 *(1.97)*	6.33, 7.78
Contradictions	42	6.92 *(1.98)*	6.30, 7.53
No. of alternate explanations			
Consistent	31	1.71 *(1.66)*	1.10, 2.32
Contradictions	42	1.45 *(1.48)*	.99, 1.92
Plausibility of favored alternate explanation			
Consistent	30	43.27 *(29.94)*	32.09, 54.45
Contradictions	42	39.86 *(26.57)*	31.58, 48.14

Note. 95% CI = 95% confidence intervals, * = significant difference between group means

Table 2

Means and standard deviations for Experiment 2 measures

	n	M *(SD)*	95% CI
Judgment of Guilt *			
Consistent	44	5.58 *(4.77)*	4.23, 7.03
Factual Errors	45	.27 *(7.10)*	-1.87, 2.40
Perception of Consistency *			
Consistent	44	7.72 *(1.54)*	7.25, 8.18
Factual Errors	45	3.47 *(2.39)*	2.75, 4.19
Perception of Voluntariness			
Consistent	44	7.46 *(2.30)*	6.76, 8.15
Factual Errors	45	6.80 *(2.45)*	6.06, 7.54
No. of alternate explanations			
Consistent	44	1.32 *(1.65)*	.82, 1.82
Factual Errors	45	1.58 *(1.41)*	1.16, 2.00
Plausibility of favored alternate explanation *			
Consistent	44	30.36 *(34.16)*	19.98, 40.75
Factual Errors	45	45.76 *(29.60)*	36.86, 54.65

Note. 95% CI = 95% confidence intervals, * = significant difference between group means

Figures

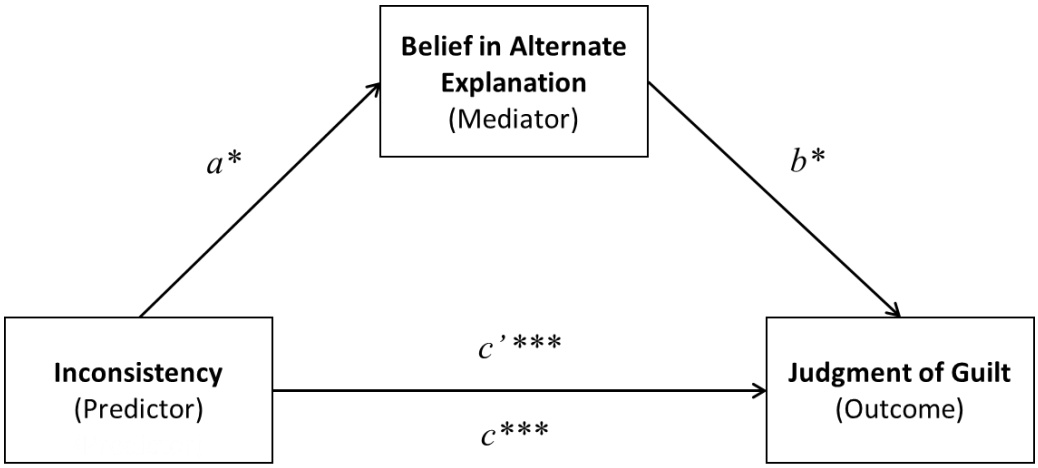

Figure 1. Experiment 2 - The effect of confession inconsistency on judgments of guilt, mediated by belief in a self-generated alternate explanation for the confession (other than guilt).

* ≤.05, **≤.01, ***≤.001

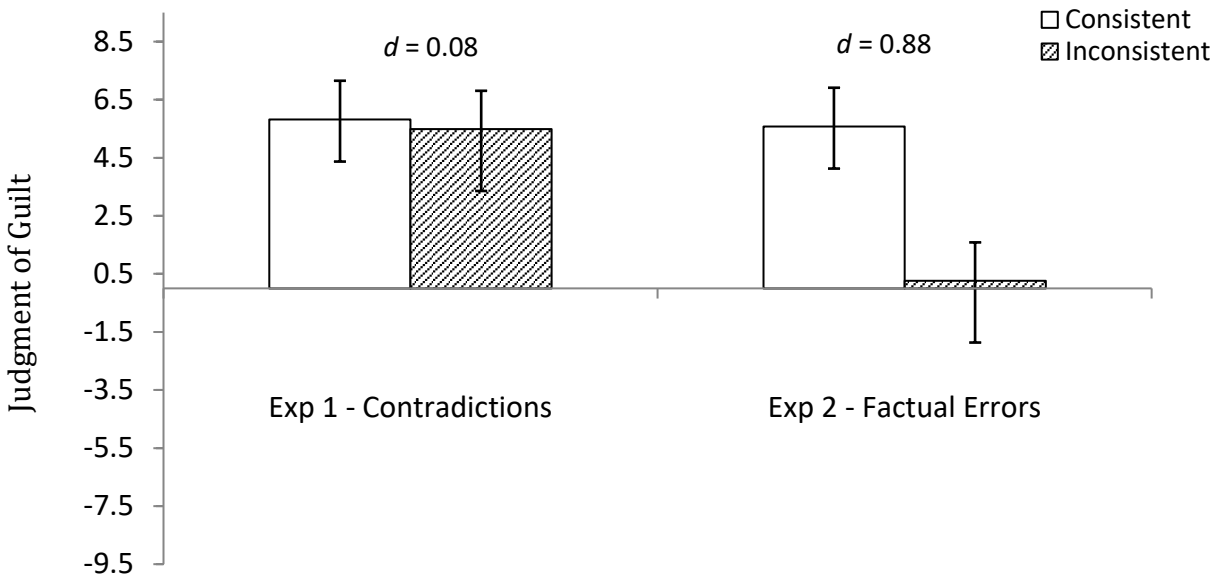

Figure 2. Experiments 1 and 2 - Effect of consistency on judgments of guilt. Error bars show 95% CIs.

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Chapter 3

Downplaying crime severity amplifies perception of guilt

3.1 Abstract

This study investigated how factual errors in confessions that either amplified or downplayed the severity of the crime influenced judgments of guilt. In a mock-juror study, participants read a confession statement and a police report. Information in the confession statement either matched the facts of the crime in the police report (*consistent* condition), the suspect admitted to a worse crime than that outlined in the police report (e.g., firing 10 shots not 3), or the suspect admitted to a lesser crime (e.g., firing 1 shot not 3). Mediation analyses yielded indirect effects: Compared to consistent confessions, both types of directional errors reduced judgments of consistency and judgments of guilt. Inconsistencies that made the suspect look better (but not those that made the suspect look worse) also increased judgments of guilt via a direct effect. Errors in confessions that downplay the severity of the crime can prompt jurors to perceive the suspect as more guilty than errors that exaggerate the severity of the crime. This effect may contribute to wrongful conviction in cases where false confessions are obtained via interrogation techniques that involve minimizing the harm done in the alleged crime.

Keywords: attribution theory, false confession, juror decision-making, inconsistencies, wrongful conviction

3.2 Introduction

False confessions have resulted in a surprising number of wrongful convictions, with the percentage of false confessions implicated in DNA exoneration cases estimated between 16% (Garrett, 2011) and 25% ("Innocence Project," 2017). These numbers stand in contrast to the commonly held belief that innocent people will not confess unless mentally ill or tortured (Leo & Ofshe, 1998). Contributing to wrongful conviction rates is the difficulty police investigators and jurors have in discovering and discounting false confessions, with a general inclination to simply trust that a confession is true. Drizin and Leo (2004) found that 30 of 37 proven false confessors (81%) who decided to go to trial, were found guilty by the jury, even after pleading not guilty. This highlights not only the overall acceptance of confessions, but the unparalleled power that confessions hold in courts (Kassin & Neumann, 1997), even when retracted (Kassin & Sukel, 1997; Ofshe & Leo, 1997).

Jurors are not always best equipped with the knowledge or skills needed to effectively apply court instructions, evidence, and legal arguments to their decisions, and might instead use heuristics that are not reliable in the unique circumstances of a court case (Bornstein & Greene, 2011). One reason why people find confessions so convincing is the strength of the heuristic that assumes that, as there is no advantage to confessing, all confessions must be true. However, there is conflicting evidence in the literature about whether this heuristic is robust in the face of inconsistent confession evidence. Some research suggests that inconsistencies in confessions have minimal impact on jurors' verdicts (Malloy & Lamb, 2010). In contrast, others have found that inconsistencies can lead jurors to reject a confession, resulting in a lower conviction rate (Henderson & Levett, 2016; Palmer, Button, Barnett, & Brewer, 2016; Woesthoff & Meissner, 2016). Such conflicting findings may be due to different types of inconsistencies being interpreted differently by jurors, such as one suspect giving multiple contradictory statements, versus a suspect giving a confession that is

factually incorrect. There is also the possibility that jurors might process confession inconsistencies differently according to the direction of the inconsistency - that is, where the inconsistency appears to increase or decrease the severity of the crime.

3.1.2 Directional errors

The direction of confession inconsistencies can be important if we think about how false confessions come about. Innocent people sometimes confess to a crime without adequate consideration of the consequences. One of the reasons why this can occur is because the person believes confessing is the only way to stop a stressful interrogation and begin the process of clearing their name (Kassin, 2005, 2012; Leo & Drizin, 2010). In order to produce a confession believable enough to satisfy the interrogator, the innocent suspect creates a story using the information they have at hand. This might include details that have been learned during the interrogation process, seen in the media, or those which could be deduced using logic or common sense. However, the innocent suspect is at a disadvantage when creating an accurate confession as they do not usually have first-hand knowledge of the crime. In their ignorance of the specifics of the crime, the suspect might inadvertently understate or overstate key details, such as admitting to shooting the victim too few or too many times compared to the actual wounds inflicted.

Some police interrogation techniques may increase the possibility of a suspect confessing to an understated version of a crime. The commonly used Reid technique (Inbau, Reid, Buckley, & Jayne, 2013) advocates the use of minimization in the police interrogation process, in which the police officer attempts to elicit a confession by downplaying the severity or consequences of the crime and providing the suspect with face-saving excuses for their involvement (Horgan et al., 2012). The use of such minimization techniques has been shown to increase the likelihood of both true and false confessions alike (Russano, Meissner, Narchet, & Kassin, 2005), providing another important reason for investigating the effect of

directional errors on how jurors perceive the suspect's level of guilt when processing confession evidence.

The aim of the present study was to investigate how factual errors in confessions that either understated or overstated the severity of the crime influenced judgments of guilt.

3.2.2 Attribution Theory

Kelley's (1973) attribution theory holds that the inferences an observer draws from another's behavior depends on attributions about the motive underlying that behavior. An important implication of this principle is that a particular behavior can lead to very different inferences depending on the attributions made by the observer. A classic example of this principle involves an observer who sees a student helping a professor. On one hand, the observer may attribute this behavior to the student's helpful nature. On the other, if the observer is aware of an ulterior motive (e.g., the professor is evaluating the student's scholarship application), the helpful behavior may be attributed to the pursuit of this ulterior motive. Thus, the same behavior (a student helping a professor) can lead to very different inferences about the underlying cause of the behavior, depending on the attributions made by the observer.

We suggest that this principle can help explain how jurors interpret directional inconsistencies that they notice in a confession. We assume that jurors are motivated to explain perceived inconsistencies in confessions and will seek explanations for them (Palmer et al., 2016). Further, we expect that the inferences drawn from inconsistencies in confession evidence will vary systematically depending on the direction of the inconsistency. For example, if the evidence shows that the suspect has confessed to a crime that is less severe than the facts would imply (e.g., admitting to firing one shot when there is evidence three were fired), the juror might reason that the suspect is lying in an attempt to make themselves look less guilty in order to attract a lesser penalty. If so, then inconsistencies that

imply a less severe version of the crime might not translate into reduced perceptions of guilt (relative to a confession without inconsistencies). However, if the evidence shows that the suspect has confessed to a worse version of the crime (e.g., firing 10 shots, not three), the juror might reasonably wonder what the suspect has to gain by lying in such a manner. As there is no perceived benefit in confessing to a crime of greater magnitude, the juror might suspect that the confession is the result of an unknown motive unrelated to guilt (e.g., perhaps the defendant is innocent and was pressured to confess). In turn, inconsistencies that imply a more severe version of the crime will lead to reduced perceptions of guilt (relative to a confession without inconsistencies). In this way, attribution theory provides a framework for investigating how jurors not only rationalize the presence of errors in a confession, but also how they investigate the types of motivations that might underpin the directionality of those errors.[1]

Although no prior studies have directly compared inconsistencies that imply a more severe versus less severe crime, two published studies have included manipulations of inconsistencies with some directional properties. Palmer et al. (2016) manipulated inconsistencies by including three details in a confession statement that differed from verified facts in a police case file. Two of these concerned non-directional details (e.g., the time of crime occurred) but the third detail implied that the suspect confessed to a crime more severe than actually occurred: the confession stated that the victim had been shot five times whereas the police file stated that the victim had been shot once. In two experiments that included this

[1] We note that these ideas are consistent with the Story Model of juror decision-making (Pennington & Hastie, 1986, 1992). According to this model, jurors construct an internal narrative about a case and then use individual pieces of evidence to confirm or alter this narrative. The notion that jurors make attributions about the reason for inconsistencies in confession evidence—and that these attributions shape the inferences drawn from the confession evidence—fits well in the story model.

manipulation, participants were less likely to convict if they read a confession that was inconsistent with the case file than one that was consistent with the case file.

Henderson and Levett (2016) also had participants read a confession that contained errors that downplayed the severity of the crime. The suspect confessed to stabbing the victim 1-2 times, and the police case report stated that the victim was stabbed either 1-2 times (consistent condition) or 38 times (inconsistent condition). In two experiments using this manipulation, the manipulation of inconsistency had a marginal or null effect on verdicts. In a third experiment, the direction of the inconsistency was counterbalanced such that some participants read a confession that exaggerated the severity of the crime and others read a confession that downplayed the severity of the crime. However, comparing inconsistencies of different directions was not the focus of that study, and these two conditions were collapsed together when assessing the effects of the inconsistency manipulation. With the two directional conditions combined, inconsistency reduced guilty verdicts. It should be noted that the third study conducted by Henderson and Levett found that guilt was reduced when inconsistencies internal to the suspect's statement were present, however this effect was not found in the study of confession contradictions outlined in Chapter 2.

Together, these results align with the rationale outlined above. When confessions contain inconsistencies that exaggerate that severity of the crime, guilty verdicts are reduced (as in Palmer et al., 2016). When confession contain inconsistencies that downplay the severity of the crime, the effects on verdicts are smaller and sometimes null (as in Henderson & Levett, 2016, Experiments 1 and 2). However, these studies did not conduct comparisons between inconsistencies of different directions; this was the focus of the present research.

3.2.3 Hypotheses

In line with Palmer et al.'s (2016) study, we hypothesised that confessions containing inconsistencies would be rated as less consistent than confessions that were consistent

(assuming people noticed the inconsistencies). We further hypothesised that juror perception of lower confession consistency would influence judgments of guilt dependent on how the jurors attributed the reasons for the errors in the confession. That is, if the confession errors increased the severity of the crime and acted to make the suspect look *worse*, then we expected greater inconsistency to be associated with lower judgments of guilt. According to attribution theory, because there is no obvious ulterior motive for the *worse* inconsistencies, jurors might assume that the inconsistencies are an indicator that the person might not have committed the crime, (*"why would someone make themselves look even worse? Maybe he doesn't know what happened because didn't commit the crime?"*).

However, if the inconsistencies decreased the crime severity and acted to make the suspect seem *better*, we predicted that while the presence of inconsistencies would reduce perceptions of confession consistency, this reduction would not necessarily translate to lower judgments of guilt. In the case of a *better* confession, there is a clear ulterior motive for the inconsistencies, with the suspect self-servingly downplaying the severity of the crime, (*"he's making errors on purpose to make himself look better. Of course he did it").*

3.3 Method

3.3.1 Participants

Ninety-four participants (67 female, 26 male, 1 undisclosed), aged 18 to 63 years (M = 26.49, SD = 9.21), volunteered from undergraduate psychology classes at [redacted], as well as from the greater university community. Participants were awarded with partial course credit, or $10 remuneration. The majority of participants (83%) spoke English as their main language at home. One participant failed to complete the demographic section of the study, however, as they completed all questions about the experimental material, those results have been included. Two participants were excluded from the study for misunderstanding the

instructions, resulting in nonsensical answers – such as believing that the police report had been written by the suspect.

Procedure

All aspects of the procedure were in accordance with the Human Research and Ethics Council guidelines of [redacted], which adheres to the National Statement on Ethical Conduct in Human Research (NHMRC, 2007, Updated May 2015). Supervised testing took place in a laboratory setting in small groups (n = 2-3), with participants giving informed consent. Participants acted as individual jurors and no deliberation or discussion took place. Random allocation was used to place participants in one of three confession conditions (*worse, consistent, better*) in a between-groups design. After reading two pieces of written evidence (a typed confession statement, and police report), participants answered the pen and paper questions in order, with instructions not to read ahead or change their answers once given. Completion time for the task was approximately 20 minutes.

Stimulus materials

Participants were given two pieces of evidence from a fictional case: a confession statement and a police summary report. The confession was presented as a typed statement in which the suspect admits to committing armed robbery at a service station and discharging a firearm at the service station attendant. The accompanying typed police summary report gave detailed information from the service station CCTV footage, including the number of shots fired, and confirmation that the safe was completely emptied in the robbery. The police report also confirmed that the safe contents had been counted and verified by two staff members prior to the robbery taking place. This was to ensure that participants did not dismiss any incorrect statement about the amount of money stolen as being due to an

administrative error or unrelated theft by a staff member. The confession statements (*consistent, better, worse*) and police report are available as Supporting Information online.

Directional errors manipulation. To test the directional effect of inconsistencies, key information in the confession statements was altered so that the confession matched the facts of the crime in the police statement (*consistent*), or the suspect admitted to a greater crime than that outlined in the police report (made the participant look *worse*), or the suspect admitted to a lesser crime than that outlined by police (made the participant look *better*). The confession errors were related to key facts of the crime (amount of money stolen, and number of shots fired) to ensure that they were salient enough to attract notice, and warrant a juror questioning the truthfulness of the confession. For example, the police report stated that three shots were fired and $2,100 was stolen. In the *better* condition, the confession stated that one shot was fired and several hundred dollars stolen. In the *worse* condition, the confession stated that around 10 shots were fired and $10,000 stolen.

Measures. After reading the confession statement and police report, participants were asked to give a dichotomous (not guilty, guilty) verdict and rate the confidence in their verdict on a scale of 1 (not confident at all) to 10 (completely confident). Previous research has found that the majority of people see a confession as an honest admission of guilt and will render a guilty verdict accordingly. Therefore, dichotomous verdicts may not prove a subtle enough measure of the possible variation in juror belief in suspect guilt. A new variable of judgment of guilt was created by combining the dichotomous verdict and confidence in verdict measures, as per the measure outlined by Tenney, MacCoun, Spellman, and Hastie (2007). Following the verdict and confidence questions, participants were asked to rate the consistency of facts of the crime between the two pieces of evidence (from 1 – not consistent at all, to 10 – completely consistent). To prime participants to think more closely

about the consistency of the evidence, they were asked to list why they thought differences (if any) between the pieces of evidence might have occurred.

3.4 Results

3.4.1 Dichotomous verdicts of guilt

Overall, 85.1% of participants gave a guilty verdict. There was no significant difference in guilty verdicts between the *consistent* (90.6%), *better* (83.3%), and *worse* (81.3%) conditions, $n = 94$, $\chi^2 (2) = 1.22$, $p = .54$.

3.4.2 Judgment of guilt

Table 1 shows the means, standard deviations and confidence intervals for judgments of guilt and perception of consistency ratings for each of the conditions.

Mediation analyses (see Fig. 1) were conducted to test whether the effect of the directional manipulations on judgments of guilt were mediated by perceived consistency (from the consistency manipulation check). Perceived consistency was considered an important mediator as the actual presence of inconsistencies might be unrelated to whether participants consciously noticed the inconsistencies or not. A similar concept was explored in Palmer et al. (2016), where the degree of perceived consistency (as measured by the number of inconsistencies reported) mediated the effect of their manipulation on juror verdicts. To test the directional inconsistencies in the present study, two separate mediation analyses were conducted: *consistent* versus *better*, and *consistent* versus *worse*.

When broken down into its components, the results of the *consistent* versus *better* conditions ($N = 61$) suggest that there were two different effects occurring. First, there was a significant indirect effect, in which the presence of inconsistencies reduced perceived confession consistency, (*a*), $b = -3.71$, $p < .001$, [-4.55, -2.89]. In turn, as perception of confession consistency reduced, judgments of guilt were similarly reduced (*b*), $b = 1.34$, $p <$

.001, [.61, 2.07]. The significant indirect effect of inconsistencies on judgments of guilt (*ab*) confirms that confession errors overall reduced judgments of guilt by decreasing perceived consistency, (*b* = -4.99, [-8.42, -1.72]). This finding replicates the indirect effect of inconsistencies found in Palmer et al. (2016), and suggests that the greater the perceived inconsistency, the larger the reduction in guilt ratings.

Secondly, and separate to the indirect effect, the direct effect of inconsistencies (*c*) operated in the opposite direction (*b* = 3.84, *p* = .036, [.26, 7.42]), with inconsistent testimony increasing judgments of guilt. The direct effect shows inconsistencies that made a person look better were associated with higher judgments of guilt, although the mechanism behind this effect is different to that of indirect effect of perceived consistency. This is consistent with the idea that errors downplaying harm lead to higher guilt ratings (independent of perceived consistency).

The results of the *consistent* versus *worse* conditions (*N* = 62) reflected similar findings to the *consistent* vs *better* conditions for the indirect effect, but not the direct effect. For the *consistent* versus *worse* conditions, the presence of inconsistencies significantly reduced perceived consistency (a), *b* = -2.10, *t* = -10.56, *p* < .001, [-2.50, -1.71], with lower perceived consistency in turn resulting in lowered judgments of guilt (b), *b* = 1.06, *t* = 2.26, *p* = .028 [.12, 2.00]. The significant indirect effect of inconsistencies on judgments of guilt (*ab*), *b* = -4.99, [-8.42, -1.72], also aligns with the indirect effect of inconsistencies on verdicts found by Palmer et al. (2016). However, unlike in the *consistent* vs *better* condition, there was no significant effect of the manipulation on judgments of guilt in the *consistent* vs *worse* conditions (*b* = .197, *p* = .428). Therefore, there was no evidence that confession inconsistencies that exaggerated the severity of the crime affected judgments of guilt separate to the mechanism of inconsistencies reducing juror perception of confession consistency.

3.4.2 Downplaying of guilt

The following analysis (see Fig. 2) was initiated by a number of responses to the verbatim question about evidentiary consistency, and was not hypothesised *a priori*. In order to explore what attributions participants made about the directional confession inconsistencies, participants had been asked to note if they found any inconsistencies between the two pieces of evidence, and explain why they thought those inconsistencies may have occurred. Responses were coded as to whether the participant believed that the confession inconsistencies were due to the suspect deliberately making his actions seem less severe. Examples of responses coded as downplaying included, *"cash amount differed – this was probably due to the perpetrator deliberately trying to downplay his actions"*, and *"the person who robbed the place is trying to make the crime a lot less serious than it actually was"*. Responses unrelated to downplaying (and therefore not coded) included, *"Accused may have thought he only fired one shot due to the panic and confusion of the situation and how scared he may have been".*

Chi square analysis revealed a significant difference between the *consistent* and *better* conditions on the number of participants who gave downplaying as a reason for the confession inconsistencies, χ^2 (1) = 11.23, $p < .001$. Nine of the 30 participants in the *better* condition responded that confession inconsistencies were due to the suspect deliberately making his actions seem less severe. No participants in the *consistent* or the *worse* conditions believed that the suspect was deliberately trying to downplay the crime. Responses in the *worse* condition were too diverse to be coded into clear categories for the purpose of further analysis, and generally reflected a broad perception that the suspect was an inexperienced criminal who was not capable of estimate large sums of money, or remaining calm enough to count the shots he fired. Examples of responses included, *"if this was his*

first offence, $2,000 may look like $10,000 to him", and *"this might be due to the robber being in a hurry to leave and didn't count or was illiterate".*

A t-test was used to analyse differences in judgments of guilt between those in the *better* condition who specifically mentioned the suspect deliberately downplaying the crime, and those in the same condition who did not mention this possibility. The mean judgment of guilt was significantly higher for those who believed the suspect to be deliberately attempting to downplay the crime (M = 8.28, SD = 1.09), compared to those who did not mention downplaying as a reason for the confession inconsistencies (M = 4.74, SD = 6.23), t (22.68) = -2.52, p = .019.

3.5 Discussion

Results showed that participants were clearly able to see when inconsistencies were present in the confessions. However, the direction of confession inconsistencies affected juror decisions in a way that we had not hypothesised. We predicted that the two types of confession inconsistencies (*better, worse*) would both affect perceptions of confession consistency, but that they would differ in their relationship between perceived consistency and judgments of guilt. We hypothesised that greater perceived inconsistency would translate to lower judgments of guilt for *worse* confessions, but not for *better* confessions. Instead, results showed that both types of inconsistencies were well detected by participants, which translated to lower judgments of guilt for both the *worse* and *better* conditions. The effect of confession inconsistencies is more robust than expected, with participants noticing and acting on inconsistent evidence, regardless of the direction of the inconsistency. This finding is consistent with Woestehoff and Meissner (2016), who found that jurors were more sensitive than expected to the situational pressures surrounding false confessions, suggesting that juror beliefs and understandings might be changing in a way that gives promise of a more thoughtful and knowledgeable juror than previously indicated.

In all conditions, the effect of the consistency manipulation on judgments of guilt was mediated by perception of consistency. This indicates that the effect of inconsistencies is reliant on the participant both noticing the inconsistencies and then perceiving them to be inconsistent. The important role that perception of consistency might play in affecting judgments of guilt can be related to theoretical reasoning about how jurors might use information in their decision making process. Theories of decision making imply that a juror's internal narrative of the crime adapts to accommodate information that has not specifically been provided, such as motivation (Kelley, 1973; Pennington & Hastie, 1986), and this information may act to alter their judgments of guilt. In the present study motivation for the confession can be extended to encompass the suspect's reasons for giving a confession that is partly inconsistent with the facts of the crime.

Crucially, there was a difference in the direct effect of inconsistencies on judgments of guilt between the *better* and *worse* conditions. In the *better* condition (but not the *worse*) there was a direct effect indicating that inconsistencies acted to increase judgments of guilt through a mechanism unrelated to the degree of perceived consistency. This suggests that, regardless of the extent to which the confession was perceived as inconsistent, inconsistencies that were seen as an attempt to deliberately downplay the severity of the crime triggered higher ratings of guilt.

3.5.1 The backlash effect of the 'better' confession

While mediation analysis showed that inconsistencies overall acted to reduce judgments of guilt, when the suspect confessed to a lesser version of the crime there was a backlash in which judgments of guilt increased. The apparent mechanism behind the backlash is that, if the juror believed that the inconsistencies were an attempt by the suspect to deliberately downplay the severity of the crime, then the suspect would be given a higher judgment of guilt than if the juror did not believe the suspect was lying for their own gain.

Verbatim responses about why there were inconsistencies between the suspect's confession and the police report frequently indicated a perception that the suspect was an experienced criminal, who deliberately lied about the crime in order to reduce his sentence. Participants in the *better* condition who specifically mentioned that the inconsistencies between the confession and police report could be explained by the suspect deliberately downplaying the crime severity, judged the suspect as guiltier than those who did not mention downplaying as a possible explanation for the inconsistencies.

This backlash suggests that, while errors in a confession could act to supress automatic judgment heuristics in jurors (where a confession is analogous to guilt), this suppression is less likely if the inconsistencies make the suspect look like they are understating the crime. When a suspect appears to be denying the severity of the crime, thus reducing their admitted culpability, the denial acts to increase the belief that the confession is an admission of guilt, with the denial of responsibility for the full crime rejected on the basis of a strong ulterior motive to deceive. This finding highlights an additional reason why the use of minimization techniques in police interrogations is problematic. That is, not only does minimization increase the risk of an understated false confession by suggesting to the suspect that the crime is not so terrible after all (Horgan et al., 2012; Russano et al., 2005), but the resulting false confession can then inflate jurors' perceptions of that suspect's guilt later on if the confession details a lesser version of the crime.

3.5.2 Limitations

A common criticism of mock juror studies is that court cases are, by their nature, infinitely more variable and complex than can be replicated in a laboratory setting. In the present study there is no attempt to claim that the methodology captures an entirely realistic jury experience and that findings can be mapped directly on to any single case involving a false confession. However, this does not reduce the applied nature of the findings. For

example, participants in Kassin and Kiechel's (1996) experiment were coerced into falsely confessing to crashing a computer program in a laboratory. While those participants are clearly not in the same position as a person being wrongfully accused of murder in a police interrogation, the findings of that experiment allowed greater understanding of the situational pressures that can increase the likelihood of an innocent person confessing. Similarly, our work aims to illustrate the situations in which people are able to consider the inconsistencies in confessions in a way that inspires new thinking about how jurors might be processing evidence that is of varying quality. The present study also helps explain how people might process directional errors when they come across them in confession evidence, and how that might then affect their perception of a suspect's guilt. Ongoing study into the source of variance in juror decision making allows researchers to make possible advances in understanding how and why jurors sometimes make wrong decisions based on poor-quality evidence. The hope is that such research can eventually be applied to the ongoing improvement and evolution of legal processes.

3.5.3 Summary

This study applied principles of attribution theory to an important applied issue–that of the ways in which jurors process confession evidence. The way in which a juror might make attributions about the errors in a suspect's confession is important when considering why juries accept some false confessions, but dismiss others. The present study shows that a person confessing to a crime will be overwhelmingly judged as guilty, but if they then understate the crime, some jurors will be even more certain that they are guilty. As a jury would not know if the confession was false, an accidental error that reduces the severity of the crime could act to make jurors even more certain that the person has committed the crime, even though the error itself should make them question the confession's veracity.

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Table 1

Mean judgment of guilt and perception of confession consistency scores

	n	*M (SD)*	95% CI
Judgment of Guilt			
Consistent	31	6.95 (4.50)	5.30, 8.60
Worse	32	5.27 (5.77)	3.19, 7.35
Better	30	5.80 (5.47)	3.76, 7.84
Perception of Consistency			
Consistent	32	8.98 (.97)	8.63, 9.34
Worse	31	4.77 (1.95)	4.06, 5.49
Better	30	5.27 (2.08)	4.50, 6.04

Note. 95% CI = 95% confidence intervals

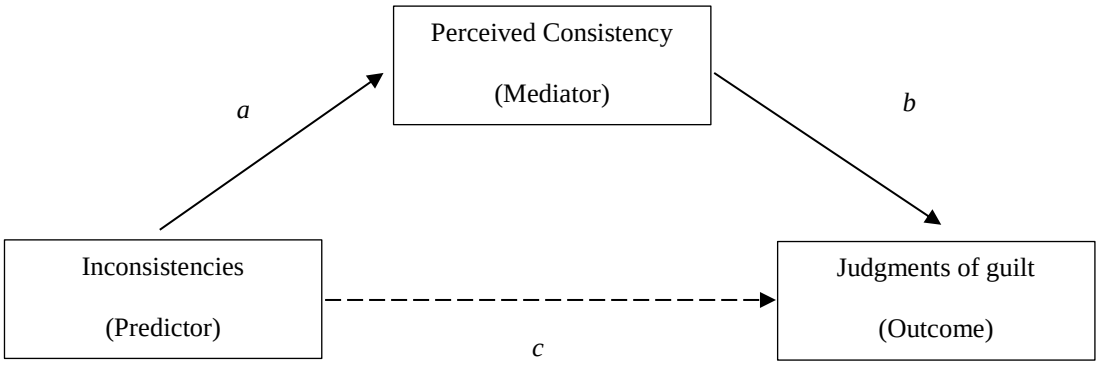

Figure 1. Mediation model testing the effect of inconsistencies (*consistent* vs *better*, *consistent* vs *worse*) on judgments of guilt, mediated by perceived consistency of the confession

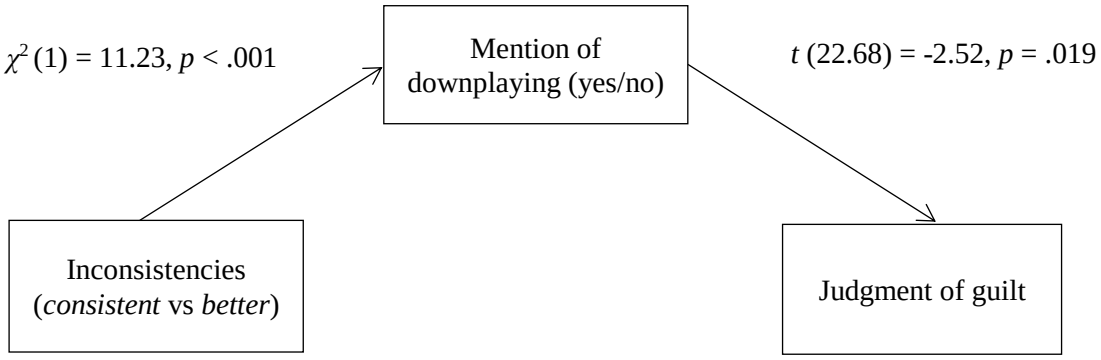

Figure 2. Model testing the effect of inconsistencies (*consistent* versus *better*) on whether participants believed the suspect was deliberately downplaying the crime, and the subsequent effect of that belief on judgments of guilt

Chapter 4

Need for cognition and juror perception of confession evidence quality

4.1 Abstract

Need for cognition has been suggested as a personality factor that may influence jurors when evaluating evidence in a trial. However, previous research using the Need for Cognition (NC) scale (Cacioppo, Petty, & Kao, 1984) as a moderator in juror decisions of guilt has yielded varying results. In addition, while NC has been tested across many evidence types, there have been few studies with confession evidence as the primary stimulus. Due to the contradictory nature of previous findings, as well as the understanding that confessions are treated differently to other types of evidence, we tested the moderating effect of NC on judgments of guilt with confession evidence as the stimulus. The current series of four studies involved presenting participants with a confession (manipulated to be problematic in terms of inconsistencies or police coercion), before completing measures including verdict preference, and the Need for Cognition scale. Findings for all four studies revealed null results, with no moderating effect of NC on judgments of suspect guilt. Theoretical and applied implications are discussed.

4.2 Introduction

For individuals who enjoy the challenge of solving difficult problems, the process of serving on a jury, weighing up conflicting arguments and evidence in order to come to a well-informed, fair verdict, would likely prove a satisfying task. Such people are described as being high in need for cognition (NC), due to their overall enjoyment of thinking, and propensity to seek out experiences that require an elevated level of thinking and engagement. High NC is a desirable trait in jurors, who should provide a sense of determination and gravitas befitting the legal process, while those with low NC are seen as the 'doers' rather than the 'thinkers' (e.g. Cacioppo & Petty, 1982). As such, NC is a likely moderator in juror decision making, where high levels of engagement should reasonably be correlated with accurate and thoughtfully determined verdict decisions. NC is predominantly measured using the Need for Cognition scale, developed by Cacioppo and Petty (1982). The NC scale is a reliable measure, used to assess the level to which individuals are inherently motivated to seek out and enjoy experiences that involve higher levels of thinking. The 18-question version of the NC scale (Cacioppo et al., 1984) asks participants to rate their agreement on a Likert-type scale to statements such as, "*I prefer my life to be filled with puzzles I must solve"*. Nine reverse scored items contained statements such as, *"I only think as hard as I have to"*.

Research findings regarding the contribution of NC in understanding factors that moderate juror decision making have been mixed. Leippe (2016) tested the effect of lax versus stringent definitions of 'beyond reasonable doubt' on mock-juror verdicts using complex stimulus materials designed to simulate a trial. NC was found to have a moderating effect on verdicts, with low NC mock-jurors only minimally influenced by the stringency of the definition, while high NC mock-jurors were strongly influenced to reduce guilty verdicts in accordance with stringent instructions. That is, if jurors were following the judicial

instructions about reasonable doubt, then the stringency manipulation should affect verdicts, with more guilty verdicts under lenient instructions than stringent instructions. The results from Lieppe et al. are consistent with the idea that high NC jurors process trial information more effectively than low NC jurors.

However, other research has found that NC interacted unexpectedly with juror decision-making Shestowsky and Horowitz (2004) tested mock-jurors for NC levels prior to a deliberation task. Participants were paired with a confederate who argued against their position (i.e. for the plaintiff or defendant as required), manipulating the strength the argument (weak or strong). Mock-jurors who were low in NC were found to have superior capacity to differentiate between weak and strong arguments and were more convinced by strong arguments to alter their initial position.

At first glance these results suggest that, paradoxically, low NC jurors were processing trial information more effectively than high NC jurors. However, this is not necessarily the case; these results might instead be explained by the effect of different processing styles, with Kassin, Reddy, and Tulloch (1990) describing high NC people as active processors, and low NC people as passive processors of information. Kassin et al. found a similar pattern of results to Shestowsky and Horowitz when testing for order effects, with low NC participants more influenced by arguments that followed the evidence, rather than preceded it, while high NC participants were more influenced by preceding arguments. These findings suggest that low NC jurors might be more susceptible to the recency effect, in which they rely too heavily on final arguments, without effectively weighting each piece of evidence in the broader context of the narrative of the crime[1].

[1] Although the present research does not focus on the recency effect, it is important to note that it has implications for the overall question of why jurors sometimes convict on faulty confession evidence and sometime do not. If jurors are relying on the most accessible argument (i.e. the last argument), then a closing argument by the prosecutor that closes down any dispute over the confession's veracity is likely to have a

Of particular relevance to our research, are studies which investigate NC as a moderator in confession cases. This type of design speaks directly to the issue of whether NC moderates jurors' ability to effectively evaluate confession evidence. Sommers and Kassin (2001) tested the interaction between NC and the influence on confession evidence on verdicts, where the suspect was inadvertently caught confessing to a double murder on an unrelated police wire-tap. Participants were told that the wiretap was either admissible, inadmissible due to a legal technicality, or inadmissible due to the poor audio quality. Sommers and Kassin found that low NC mock-jurors gave similar verdicts, without regard for the admissibility of the confession, while high NC mock-jurors altered their verdict according the admissibility criterion provided. When the confession was ruled admissible, high NC participants reacted appropriately and rendered mostly guilty verdicts, while low NC participants did not. However, when the confession was ruled as inadmissible due to a legal technicality, the opposite effect occurred with low NC mock-jurors giving significantly higher guilty verdicts than high NC mock-jurors. The reason suggested for this particular finding is that high NC jurors are more concerned with reaching a just verdict, and are prepared to think beyond the provided admissibility status when making their judgment (Sommers & Kassin, 2001). The finding shows that high NC jurors were more sensitive than low NC jurors to admissibility information. However, we cannot assume, based on these results, that high NC jurors will be more sensitive than low NC to other variations in the quality of confession evidence itself, such as the degree of coercion involved in eliciting the confession, or the presence of inconsistencies.

The moderating effect of dispositional factors in confession evidence cases was also considered in two studies investigating camera-angle bias in videotaped confessions (Lassiter

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disproportionate influence over their decision, as it also acts to confirm the fundamental belief that confessions are only given by guilty parties.

et al., 2005; Lassiter, Slaw, Briggs, & Scanlan, 1992). Camera-angle bias describes the way that a suspect is perceived to be more guilty if the camera is focused directly on them, excluding the interrogator. As Lassiter et al. (1992) found no effect of need for cognition on mock-jurors', with high NC participants just as susceptible to camera-angle bias as low NC participants (Lassiter et al., 1992), a further study was conducted to test whether attributional complexity might instead moderate susceptibility to camera-angle bias (Lassiter et al., 2005). Where need for cognition is concerned with the motivation to engage in challenging tasks, attributional complexity refers to the capacity to make causal inferences. Lassiter et al. hoped that attributional complexity might act as a predictive dispositional factor in identifying which jurors would be negatively influenced by camera-angle bias, in a way that need for cognition had not. However, the predicted interaction between attributional complexity and camera bias on verdict and voluntariness did not materialize, although participants high in attributional complexity were significantly more likely to view the confession as voluntary.

Overall, previous research has produced some conflicting results. While some authors suggest that high NC jurors might be more sensitive to variations in the quality of evidence (Leippe, 2016; Sommers & Kassin, 2001), others disagree (Kassin et al., 1990; Shestowsky & Horowitz, 2004). Furthermore, no previous research has directly examined whether NC moderates the effect of manipulations of the quality of the confession content (e.g. confession errors).

However, echoing the sentiment of Lassiter et al. (2005) and many others, we believe that understanding the attributes of individual jurors is as vital as identifying influencing situational factors in unravelling the process of juror decision-making. It is important to assess whether individual differences play a part in judgments of guilt, as this may help account for the discrepancy in the literature, and in case evidence, as to the propensity of

jurors to simply accept a confession, whether strong (i.e., voluntary and matching the facts of the crime) or weak (i.e. coerced; not matching facts of the crime). We know from wrongful conviction statistics that jurors will accept confessions that were patently incorrect, or only given under the pressure of police coercion. Yet, there are also some cases where jurors have recognized that a confession is problematic enough to warrant rejection, even at the risk of a hung jury. Therefore, it is important to look not only at attitudes towards specific issues that might case differential juror judgments (such as the death penalty, or sentencing of specific crimes), but to look to the individual juror. Being able to understand even a small portion of the variance in the processing of confession evidence, helps us to build a clearer picture as to why wrongful convictions occur in some situations, and how we can lessen the likelihood of them occurring.

To this end, we examined NC as a moderator of the effects of confession quality on judgments of guilt across 4 studies (described in chapters 2-4). In each study, participants read evidence relating to a fictional trial and were asked to make a verdict judgment and rating of confidence in that verdict (which were combined to compute a judgment of guilt). Each study included one or more manipulations of factors related to confession quality (e.g., inconsistencies; the presence of coercion). Participants in each study completed the Need for Cognition Scale (Cacioppo et al., 1984) after making their verdict and confidence ratings. The key question was whether NC scores would moderate the effects of factors relating to confession quality, such that variations in quality would have a larger effect on judgments of guilt for high NC participants than low NC participants.

4.3 General Method

4.3.1. Participants

A total of 399 jury-eligible participants completed the Need for Cognition scale as part of a larger juror-decision making project, comprising four separate experiments.

Participants were undergraduate students recruited from the University of Tasmania and the wider community, and were paid for their time, or rewarded with partial course credit.

4.3.2. Stimulus materials

In all experiments, participants were asked to read confession evidence and answer questions based on that evidence. The evidence booklet contained either a single-page confession statement (Experiment 4), or a multi-page transcript of interview in which the suspect confessed (Experiments 1, 2, and 3). Experiments 3 and 4 also included a police report summarizing the facts of the case to establish the accuracy of the accompanying confession statement.

4.3.3. Dependent measures

All experiments contained measures of guilt, confidence in guilt, and manipulation checks of consistency and voluntariness. Participants were asked to render a verdict of guilty or not guilty, based on the evidence, and rate their confidence in their verdict on a scale from 1-10.

Manipulation checks were included to measure the extent to which participants could discern whether the confession contained inconsistencies, and whether the confession had been given voluntarily or not, with each measure rated on a scale from 0 to 10, with higher scores representing more consistent, and more voluntary confession respectively.

Following questions about the case evidence, participants completed the 18-question Need for Cognition scale (Cacioppo et al., 1984). Responses were given on a 9-point Likert scale (1 = strongly agree; 9 = strongly disagree) to self-report statements (e.g. ‘I prefer my life to be filled with puzzles I must solve’). Total scores had a possible range of 18 to 162, after scoring and reverse scoring the individual items, with a median split allowing for participants to be categorised as low NC or high NC. Low scores indicated people with little

desire to engage in thinking, beyond that necessary, while high scores indicated people who chose to engage in deeper thinking for their own satisfaction.

4.3.4 Procedure

The four experiments followed the same procedure. First, participants were provided with information on the purpose and requirements of the experiment. Once informed consent was given, two booklets were provided (evidence booklet, question/answer booklet) with written and verbal instructions on how to proceed. Sessions took place in small groups (n = 2-12) and were supervised to ensure compliance with instructions. Participants were asked to imagine that they were a juror, taking part in a trial, and make an individual decision about the suspect's guilt, without discussion with other participants. They were informed that they were to base their decision based on the information read in the evidence booklet, and that no legal knowledge was needed to make a decision. After reading the evidence booklet, participants were able to open the question booklet. Questions were to be answered in order, with no changes to be made once that question had been completed. As we were testing perception of evidence, not memory, participants were free to refer back to the evidence booklet at any time while answering the questions and were able to make notes on the evidence booklet. Once a participant had completed the questions, they were debriefed verbally or in writing before being allowed to leave the testing room.

4.3.5 Data Analysis

Of the 432 participants in total across the four experiments, 399 completed the Need for Cognition scale. A total of 33 participants were excluded because they either did not complete the NC scale, missed items on the scale, or recorded multiple values for items on the scale. Participants were categorised as being low NC or high NC based on a median split (see Table 1).

Table 1

Mean, standard deviation, median and range of Need for Cognition scores

Experiment	*n*	Minimum	Maximum	*M (SD)*	Median
Experiment 1: Coercion	161	54	153	108.44 (18.92)	111.00
Experiment 2: Contradictions	70	68	145	111.24 (15.63)	112.50
Experiment 3: Errors	89	66	156	112.47 (18.96)	113.00
Experiment 4: Directional Errors	81	71	154	112.98 (18.75)	113.00

Note. Possible scores on the Need for Cognition scale range from 18 to 162.

Each study collected verdict and confidence in verdicts scores from participants. These two measures were combined to create a scalar variable, where a guilty verdict was assigned a positive score (+), and a not guilty verdict a negative score (-) then added to the confidence score (1-10), to create a continuous variable of (-9.5 to 9.5) (as per Tenney et al., 2007). The lowest end of the scale describes a participant who is 100% confident in a not guilty verdict, with the highest end of the scale reflecting 100% confidence in a guilty verdict. The scalar variable has two advantages over the dichotomous guilty/not guilty verdict in that it allows a more subtle investigation of the judgment of suspect guilt, while also providing the continuous variable needed for the moderation analysis.

Total NC scores were used as the moderator variable for the effect of condition on judgments of guilt, using the PROCESS macro for SPSS (Hayes, 2013) (as shown in Figure 1.). While we would not expect NC to have any direct effect on judgments of guilt, there should be a moderating effect of NC on judgments of guilt as people with higher NC should be more motivated to think about why inconsistencies might be occurring in the confession, and what that might mean about the suspect's guilt.

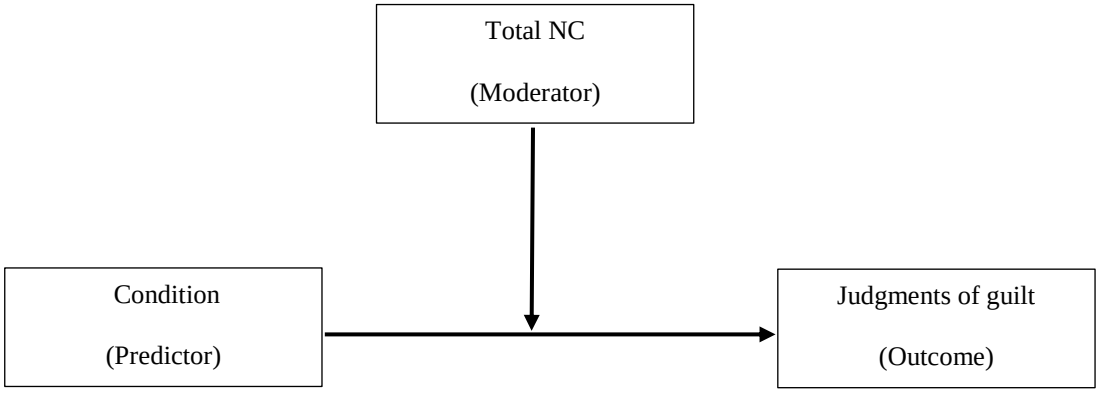

Figure 1. Moderation analysis showing the interaction between total NC and the predictor and outcome variables

Participants were categorised as low NC or high NC through a median split

4.4 Internal consistency

Across the four studies, the NC scale showed good internal consistency, with Cronbach's alpha values of .89 for experiments 1, 3, and 4, and .85 for experiment 2 (contradictions). These values are similar to the alpha of .90 reported for the 18-question NC scale in Cacioppo et al. (1984) . This suggests that the NC scale is robust, and that scale reliability was not a contributing factor to our inability to find any moderating effect of NC on juror decision making in confession cases.

4. 5 Experiment 1: Inconsistencies and Coercion

Experiment 1 tested the effect of confession inconsistencies (in the form of contradictions and factual errors), and the effect of police coercion in the confession interview, on mock-juror judgment of suspect guilt.

4.5.1 Method

A full description of the method is available in Chapter 5 of this thesis. Experiment 1 participants numbered 176 in total (136 female), with 161 successfully completing all questions in the NC scale. Participants ranged in age from 18 to 63 years (M = 24.99, SD = 9.45). Participants were randomly allocated to one cell of a 2 (consistency) x 2(voluntariness) between-groups factorial design.

The evidence in this experiment comprised four versions of a fictional transcript of a police interview in which a suspect confesses to a physical assault charge. The versions were altered to include or exclude the presence of inconsistencies in the transcript (where the police officer refers back to a previous statement that the suspect made, contradicting certain facts), and the presence and absence of coercive interrogation techniques. In the transcript, the suspect confesses to assaulting the victim during a botched robbery attempt, after previously meeting her to buy a used car.

4.5.2 Results

Moderation analysis tested whether total NC scores moderated the effect of confession consistency (consistent, inconsistent) on judgments of guilt. The overall model was significant, N = 161, F (3, 157) = 5.40, p = .002. The main effect of confession consistency on judgments of guilt was also significant, b = -3.00, t = 1.59, p < .001, with inconsistencies in the confession reducing perception of suspect guilt. However, there was no main effect of NC on judgments of guilt, b = .02, t = .97, p = .335, and there was no significant interaction at the moderator, b = .07, t = 1.59, p = .113. The addition of NC to the model accounted for only 1.5% of the variance in judgment of guilt scores in addition to the presence of inconsistencies alone. Thus, NC did not moderate the effects of confession consistency on judgments of guilt.

The second predictor variable tested in Experiment 1 was that of confession voluntariness (voluntary, coerced). The overall model was significant, $N = 161$, $F(3, 157) = 3.77$, $p = .012$. The presence of coercion in the confession significantly reduced judgments of guilt, $b = -2.53$, $t = -3.04$, $p = .003$. There was no main effect of NC on judgments of guilt, $b = .02$, $t = .68$, $p = .498$, nor was there a significant interaction at the moderator, $b = -.06$, $t = -1.28$, $p = .203$. The interaction added less than 1% to the overall variance accounted by the model on judgments of guilt. Thus, NC did not moderate the effects of coercion on judgments of guilt.

4.6 Experiment 2: Contradictions

Experiment 2 tested the effect of contradictions in a confession (where the suspect corrects themselves after contradicting their own story) on mock-jurors' judgments of suspect guilt.

4.6.1 Method

Experiment 2 participants numbered 73 (53 female), with 70 completing all questions on the NC scale. Participant ages ranged from 18 to 60 years ($M = 27.47$, $SD = 11.17$).

Participants were randomly allocated to read one of two police interview transcripts in which the suspect confesses to assault and attempted robbery, manipulated for the presence of contradictions in a confession (no contradictions, contradictions). The transcript was closely based on that used in Experiment 1, with changes representing the desire to only reflect inconsistencies that involved the suspect contradicting his own story, rather than taking the form of verifiably incorrect factual errors.

4.6.2 Results

Moderation analysis was used to test if total NC scores acted as the moderator on the effect of inconsistencies in the form of contradictions in the confession (no contradictions,

contradictions) on judgments of guilt. The overall model was not significant, $N = 70$, F (3, 66) = .69, $p = .561$. There was no effect of contradictions on judgments of guilt, $b = .23$, $t = .25$, $p = .804$. NC did not have a direct effect on judgments of guilt $b = .04$, $t = 1.25$, $p = .215$, and there was no significant interaction of total NC as moderation on the effect of condition on judgments of guilt, $b = .04$, $t = .68$, $p = .497$. The interaction added less than 1% to the overall variance accounted by the model on judgments of guilt.

4.7 Experiment 3: Factual errors

Experiment 3 tested whether jurors would be influenced by confession inconsistencies in the form of verifiable factual errors, and reduce judgments of guilt accordingly.

4.7.1 Method

Participants for Experiment 3 totalled 89 (60 female), aged between 18 and 61 years ($M = 27.19$, $SD = 10.44$). Eighty-six participants successfully completed the NC scale.

Confession transcripts for the experiment closely resembled those used in Experiments 1 and 2, with the addition of a police summary report that outlined the facts of the crime (e.g. times given by witnesses, hospital reports, ballistic information). The police report was added to allow comparison with the confession interview transcript that would reveal if the suspect had made factually incorrect statements in confessing to the assault during the attempted robbery.

4.7.2 Results

The overall model was significant, $N = 86$, F (3, 82) = 5.69, $p = .001$, with factual errors significantly reducing judgments of guilt, $b = -5.25$, $t = -3.89$, $p < .001$. However, NC had no direct effect on judgments of guilt, $b = -.00$, $t = -.08$, $p = .939$. Total NC scores did not moderate the effect of confession inconsistencies in the form of verifiable factual errors (no errors, errors) on judgments of guilt, $b = .02$, $t = .37$, $p = .709$. The interaction did not

contribute any increase in the percentage of variance in judgments of guilt in addition to the original model.

4.8 Experiment 4: Directional errors

Experiment 4 extended the findings of Experiment 3, in which factual errors reduced judgments of guilt, by testing whether the direction of the factual errors differentially influenced perception of suspect guilt.

4.8.1 Method

Of the ninety-four participants (67 female, 26 male, 1 undisclosed), aged 18 to 63 years (M = 26.49, SD = 9.21) tested, 82 successfully completed the NC scale.

This experiment used a single-page confession statement, along with a police report outlining the verifiable facts of the case (e.g. CCTV footage), in which the suspect confesses to the armed robbery of a service station. In all three versions, the suspect confesses, however in the 'better' version the suspect makes errors that appear to reduce the severity of the crime (i.e. less shots fired, less money stolen), while in the 'worse' version the suspect's errors appear to increase the severity of the crime (i.e. more shots fired than actually reported, more money stolen).

4.8.2 Results

The predictor variables were analysed separately, with the directional factual error conditions split into two groups (control vs worse, control vs better). For the control vs worse group, the overall model was not significant, N = 54, F (3, 50) = 1.51, p = .224. There was no significant effect of condition on judgments of guilt, b = -.82, t = 1.15, p = .255. NC did not have a direct effect on judgments of guilt, b = .06, t = 1.53, p = .131, and there was no significant increase in variance accounted for as a result of the interaction, b = -.03, t = -.85, p = .399.

Similarly, for the control vs better analysis, the overall model was not significant, N = 53, F (3, 49) = 1.27, p = .294. The direct effect of condition on judgments of guilt was not significant, b = -.38, t = -.28, p = .782. NC also had no direct effect on judgments of guilt, b = .05, t = 1.41, p = .163, and did not act as a moderator to the relationship between the directional errors and judgments of guilt, b = -.09, t = -1.25, p = .218. The interaction did not significantly increase the amount of variance accounted for above the original model.

4.9 Summary and general discussion

The current study presented four experiments in which need for cognition was tested as a possible moderator in juror decision making about confession evidence. Across the four studies, NC scores did not moderate the effects of any of the independent variables on judgments of guilt. These results suggest that NC does not influence the extent to which jurors are sensitive to variations in the quality of confession evidence. There are a number of possible explanations for these findings; 1) that while dispositional factors may well moderate juror decisions, need for cognition did not do so in these studies, 2) that motivation as the primary driver of NC may not be activated in confession cases, where the confession is just assumed to be true, and 3) that trials in general, and especially those that involve confessions, artificially raise engagement levels for low NC people so that their motivation to solve the puzzle of the case is similar to high NC jurors. We also note in our discussion that while NC did not moderate juror decision making in this instance, that other individual differences in disposition may contribute to variations in verdict preferences not accounted for by situational factors.

The lack of moderation indicates that those high in NC did not process the problematic areas of confessions any differently to those who were low in NC. This contravenes the foundational premise of need for cognition, which is that people high in NC are more motivated than those low in NC to seek out and engage with cognitively challenging

tasks. In considering how to explain these results, it is important to note that the central component of NC is motivation to think deeply on a topic, not the capacity to do so. In light of this, our results suggest that participants' motivation to engage with confession evidence did not differ systematically with NC scores.

One way that this could occur is if participants had low motivation to engage with the processing of confession evidence, regardless of whether they were high or low in NC. This notion aligns with the persistent belief that jurors do not process confession evidence with the same level of scrutiny as they do other types of evidence. That is, if it is assumed that someone would not confess unless guilty (Kassin, 2012; Leo, 2008), then it follows that confession evidence does not require close evaluation. To the extent that this belief is widely held, we would expect that people, regardless of their NC score, would not engage much in processing of confession evidence.

However, this explanation cannot account for the main effects of confession quality variables found in our data. That is, if participants tended to engage little in processing confession evidence, then manipulations of confession quality (such as coercion and errors) would have minimal effect on judgments of guilt, regardless of NC scores. This is not what the data show; instead, these manipulations did affect judgments of guilt, and the magnitude of the effect did not vary with NC scores.

A second explanation, raised by Sommers and Kassin (2001), is that trials are naturally engaging for all jurors, regardless of NC level. That is, people (whether high or low in NC) will be motivated to engage with processing confession evidence when acting as a juror. This could result from the evidence being inherently engaging, or from a sense of duty to pursue justice. This explanation is consistent with the main effects of coercion and errors

found in our data: Participants were sensitive to differences in the quality of confessions, and this applied regardless of NC scores.

Therefore, while there might be some individual characteristics that account for variance in perceptions of suspect guilt when evaluating an inconsistent confession, NC seems to not be such a characteristic. It seems that participants are motivated to engage with processing confession evidence regardless of their pre-existing tendency to engage with challenging cognitive tasks.

4.9.1 General discussion and future directions

There are a number of differences between previous research and the current research that may have contributed to our finding that NC did not moderate the condition effects on perception of guilt. Primarily, case evidence and overwhelming research have shown that confessions are treated differently to other types of evidence. Therefore, we may not be able to rely on NC studies that have used materials that did not include confession evidence.

Crime type may also affect the moderating effect of NC. A meta-analysis of juror studies measuring NC (Devine & Caughlin, 2014) revealed that most NC studies have the defendant on trial for homicide, raising questions about the generalisability of findings across different crime types, such as assault or theft. Our particular study provides some indication that the moderating effect of NC on perceptions of guilt may not extend to violent crimes that do not result in murder. While we have no data to confirm this thought, we speculate that a confession for a more serious crime might increase the difference between motivation levels of low and high NC participants, in a way that lesser crimes may not. Future research may choose to test this by increasing the severity (and therefore consequences) of the alleged crime. We would also suggest that a further subset of case characteristics be included in

future meta-analyses; that of evidence type (e.g. eyewitness testimony, expert witness testimony, confession evidence).

In summary, we found no evidence that need for cognition acts as a dispositional characteristic that influences perception of suspect guilt when viewing inconsistent confession evidence. We speculate, as per previous researchers, that real court trials temporarily inflate engagement with evidence with low and high NC jurors being equally motivated to perform their duties well. Additionally, the nature of confessions is such that they may not trigger the increased motivation to explore challenging intellectual tasks that characterises high NC jurors.

4.10 References

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Chapter 5

Testing the predictive validity of the Attitudes Toward Coerced Confessions scale

5.1 Abstract

Clark, Boccaccini, and Turner (2010) designed the Attitude Toward Coerced Confessions (ATCC) scale as a measure of juror beliefs about coercive interrogation techniques and the phenomenon of coerced confessions. Two subscales purport to measure support for coercive police interrogations (CI subscale), and belief that confessions can be coerced from innocent people (CC subscale). To our knowledge, the ATCC has not been tested for its predictive validity, despite the clear benefit of understanding why some jurors will accept coerced confessions as truthful statements of guilt. The current study asked mock-jurors to judge a suspect's guilt after reading a confession transcript manipulated for coercion and consistency, and complete the 9-question ATCC scale.

High CI mock-jurors did not alter their verdicts when the confession was the result of a coercive interrogation, while low CIs judged the suspect as significantly less guilty when coercion was used. That is, the presence of coercion in a confession transcript reduced judgments of guilt differently, dependent on how strongly people supported coercive interrogation techniques. The presence of inconsistencies in the confession similarly influenced judgments of guilt dependent on whether the person did, or did not, believe that confessions could be coerced from an innocent person. High CC mock-jurors judged the suspect as less guilty when the confession contained inconsistencies, while low CCs showed no difference in belief in guilt between the control and inconsistent conditions. Findings suggest the ATCC can isolate some attitudes that influence confession evidence, and predict which individuals will engage with problematic confession evidence more objectively.

5.2 Introduction

Although it is counterintuitive that an innocent person might confess to a crime they did not commit, false confessions do occur and have contributed to numerous convictions of innocent people (e.g. "Innocence Project," 2017; Kassin, 2012). Researchers have rightly focused much attention on understanding how certain interrogation techniques can increase the likelihood of false confessions, and making recommendations to reduce the chances of false confessions occurring (e.g. Kassin et al., 2010). However, until recommended changes to interrogation techniques are widely adopted, false confessions will continue to occur. In light of this, it is important to develop an understanding of how jurors process confession evidence and, in particular, how jurors' judgments of guilt are influenced by differences in the quality of confessions. Such knowledge may pave the way for instructions that help jurors to process confession evidence more effectively.

There is considerable variation in how jurors' decisions are affected by differences in the quality of confessions. Some confessions, for example, contain inconsistencies or may have been obtained with coercion. Although such information should lead a juror to question the validity of a confession, this is not always the case. Sometimes jurors will judge a person as less guilty if their confession is inconsistent (Henderson & Levett, 2016; Palmer et al., 2016; Woestehoff & Meissner, 2016), and sometimes not (Drizin & Leo, 2004; Malloy & Lamb, 2010). Similarly, sometimes jurors are unconcerned by the use of coercion (Kassin & Sukel, 1997), while other times jurors reduce their judgment of suspect guilt if the confession shows signs of being coerced (Palmer et al., 2016).

One factor that might help explain such variation in decisions is individual differences in attitudes to and beliefs about confessions. For example, evidence that a confession may have been coerced might have different effects on judgments of guilt depending on whether or not the juror think that coercion is a reasonable interrogation tactic. In this study, we tested

the validity of one measure of such attitudes, the Attitudes to Coerced Confessions scale (ATCC; Clark, Boccaccini, & Turner, 2010). Specifically, we examined whether scores on the ATCC moderate the effect that factors related to the quality of confessions (i.e., coercion and inconsistencies) have on judgments of guilt.

5.2.1 Effects of Coercion on Judgments of Guilt

Confessions must be given voluntarily in order to be admissible in court. Some police interrogation techniques, therefore, incorporate strategies designed to convince the guilty person that confessing is the best option available to them, within the limits of the law. Unfortunately, these strategies have also proven effective at convincing innocent suspects to confess, resulting in false confessions. Although the opposite of a voluntary confession is a coerced confession, coercive police interrogation strategies, short of physical torture, are used (in some countries, but not in others) to produce admissible confessions. Coercive practices include presenting false evidence, refusing denials of guilt, and extended interrogations (e.g. Kassin et al., 2010; Leo, 1996). The justification for using such techniques relies heavily on the difficulty that people have in believing that an innocent person—unless tortured or mentally incapacitated—will confess to a crime they did not commit (Leo & Ofshe, 1998). (Note that this belief is somewhat antithetical to the requirement for confessions to be voluntary in order to be admissible in court).

Not only do people confess under coercion to crimes that they did not commit, juries are also prone to accepting such confession evidence, even when they are aware that the confession has been coerced. In a test of the 'harmless error rule', Kassin and Sukel (1997) questioned if mock-jurors would disregard a confession if they were told that it had been admitted in error and instructed not to use the confession when making their verdict decision. While participants stated that they had followed the admonition to disregard the confession, the presence of the confession still increased guilty verdicts, with 44% in the confession

group giving a guilty verdict, in comparison to 19% in the no-confession group. The fact that almost half of participants voted guilty despite acknowledging that the confession was coerced is consistent with the notion that some people consider coercion to be a valid method of eliciting a true confession from a suspect. However, in comparison to other studies, this proportion of guilty verdicts appears surprisingly low. For example, Drizin and Leo found that 80% of false confessions cases where the suspect denied the confession and pleaded not guilty, were still found guilty by the jury. The relatively low conviction rate in Kassin and Sukel's study is consistent with the idea that some people believe that coercive interrogation techniques can elicit false confessions from innocent people. Thus, overall, jurors may lack homogeneity in their interpretation of coerced confessions, with some jurors finding such evidence more convincing than others.

One possible source of such variance is individual juror attitudes toward coerced confessions. For example, a juror who supports coercive interrogation tactics is unlikely to be concerned that the voluntariness of the confession might have affected its validity, and may therefore ignore the judge's instructions to disregard the coerced confession. A person who did not support coercive interrogation tactics might be more likely to adhere to the judge's instructions. Thus, a measure that can effectively tap into support for coercive interrogation techniques would prove useful in predicting the extent to which coercion in obtaining a confession influences perceptions of guilt.

5.2.2 Measures of juror attitudes

Predicting how jurors will behave when presented with a piece of evidence in court is lucrative business for professional trial research firms (Crocker & Kovera, 2011). To those investigating wrongful convictions, however, the aim is to understand why jurors sometimes make the wrong decision, and how such this can be prevented. For both, identifying which jurors are likely to be concerned by inconsistent or coerced confessions, and which are likely

to be convinced by them, is an important step in understanding how and why jurors make the decisions they do.

While there are scales measuring juror bias (Kassin & Wrightsman, 1983), and other individual differences that may affect juror decisions, such as authoritarianism (Boehm, 1968), scales specifically measuring juror belief in regards to confession evidence are in scarce supply. Concerned about factor structure issues and low internal consistency of the existing Confession Attitude Scale (Wrightsman & Engelbrecht, 2004), Clark et al. (2010) set out to create a new scale measuring juror attitudes toward coerced confessions. The Attitudes Toward Coerced Confessions scale (ATCC; Clark et al.) aimed to measure the propensity of an individual to question the validity of a coerced confession, rather than simply accepting the confession as true, regardless of the tactics used in the interrogation process.

The ATCC uses two subscales to measure two discrete attitudes toward coerced confessions that might affect whether jurors are concerned about coercive aspects of interrogation in confession cases. The Coercive Interrogation subscale (CI) consists of 4 questions, such as *'Police officers should be allowed to do whatever it takes to get criminal suspects to confess'*, that measure the level of support for coercive interrogation techniques. The higher the score on this scale, the greater is the endorsement of coercion.

The Coerced Confessions subscale (CC) measures how strongly a person believes that innocent people can be coerced into confessing. The CC comprises 5 questions such as, *'sometimes, people will confess to anything to stop a stressful interrogation'.* Higher scores on the CC subscale indicate greater openness to the idea that an innocent person might falsely confess to a crime they did not commit.

Clark et al. (2010) found that scores on the two subscales were negatively correlated, such that greater endorsement of coercive techniques was associated with lower openness to

the possibility that an innocent suspect might confess. That is, high scores on the CI subscale were associated with low scores on the CC subscale, and vice versa. Clark et al. also found that scores on the two subscales were related to participants' perceptions of guilt. Higher ratings of guilt were associated with higher scores on the CI subscale, and lower scores on the CC subscale.

These findings provide preliminary support for the notion that the ATCC might be a useful measure of jurors' attitudes regarding confession evidence. However, the results reported by Clark et al. (2010) may simply reflect a tendency for people who score high on the CI subscale (and low on the CC subscale) to be relatively harsh in delivering verdicts. Crucially, those data provide no information about the extent to which scores on the ATCC predict jurors' sensitivity to variations in coercion. This is a central issue for establishing the validity of the ATCC. If the CI subscale effectively taps into level of support for coercive interrogation techniques, then scores on this scale will moderate the effect of coercion on perceptions of guilt. That is, a manipulation of coercion will have a stronger effect on perceptions of guilt among people who score low on the CI subscale (i.e., those who consider coercive interrogation tactics problematic), and a weaker effect among those who score high on the CI subscale (i.e., those who support the use of coercive tactics).

5.2.3 The role of attitudes

The extent to which scores on the CI subscale predict the influence of coercion on perceptions of guilt is perhaps the clearest test of the validity of the ATCC. However, scores on the CC subscale of the ATCC may be useful in predicting variability in the effect of other aspects of confession quality on perceptions of guilt. Jurors are prone to accepting confessions that contain problematic characteristics, other than coercion. In an analysis of 38 known false confession cases (proven by DNA evidence), Garrett (2010) found that the majority contained information that was inconsistent with evidence, such as that taken from

the crime scene, or the victim's testimony. These cases provide evidence that some jurors will accept a confession that contains the type of inconsistencies that would likely cause them to disregard a different type of evidence (such as eyewitness testimony) (Malloy & Lamb, 2010). Yet other evidence indicates that jurors have the capability to be more discerning about problematic confession evidence (Henderson & Levett, 2016; Palmer et al., 2016; Woestehoff & Meissner, 2016) and might well dismiss an inconsistent confession as invalid evidence of guilt.

The ATCC subscale which tests the belief that coercion can be used to coax a confession from an innocent person (CC), would be well placed to test why inconsistencies sometimes result in lower belief in suspect guilt, and sometimes result in wrongful conviction. If we think about how a person might process inconsistent confession evidence, an individual who adheres to the belief that only guilty people will confess might attribute confession inconsistencies to forgetfulness, stress, drug use, or some other attribute unrelated to innocence. However, an individual who believes that innocent people sometimes confess to crimes simply to end the stress of the interrogation, might well see those inconsistencies as an indication that the suspect is incapable of accurately reporting the facts of the crime because they were not involved. Thus, the effect of inconsistencies in confession evidence would be stronger among jurors who score high on the CC subscale (i.e., those who are more open to the possibility of an innocent person falsely confessing) than among jurors who score low on the CC subscale.

5.2.4 Summary

Our goal was to investigate whether the ATCC, could accurately predict juror attitudes towards the use of coercive interrogation tactics, and their general belief that confessions can be coerced out of innocent suspects. To achieve this, we ran a mock-juror study in which participants were asked to act as jurors and consider evidence presented to

them before making a judgment about the likely guilt of the suspect. Participants were asked for their opinion as an individual juror (i.e., there was no deliberation with other mock-jurors). Evidence was in the form of a police transcript of an interview with the suspect in which the suspect confesses to a crime. We manipulated two factors: the presence of coercion and the presence of inconsistencies in evidence given by the suspect (details of these manipulations appear in the Method).

We predicted that scores on the subscales of the ATCC would moderate the effect of inconsistencies and coercion on judgment of suspect guilt. Specifically, we hypothesized that the presence of coercion in obtaining the confession (cf. no coercion) would reduce perceptions of guilt to a greater extent for participants who scored low on the CI subscale (indicating low support for coercive tactics) than those who scored high on the CI subscale (indicating high support for coercive tactics). We also hypothesized that the presence of inconsistencies in confession evidence would reduce perceptions of guilt to a greater extent for participants who scored high on the CC subscale (indicating higher belief in the possibility of false confessions occurring) than for those who scored low on the CC subscale (indicating low belief in the possibility of false confessions occurring).

5.3 Method

This study tested whether the subscales on the ATCC were able to effectively predict how jurors would perceive suspect guilt when reading a confession manipulated for coercion and consistency. Participants were asked to act as mock jurors and review confession evidence from a trial.

5.3.1 Participants.

One hundred and seventy-six participants (136 female) were recruited from the university campus and remunerated $15 or received partial course credit. Participants ranged in age

from 18 to 63 years (M = 24.99, SD = 9.45), with 93.7% speaking English as their main language at home, and 88% studying at university on a full-time basis. Participants were randomly allocated to one cell of a 2 (consistency) x 2 (voluntariness) between-groups factorial design.

5.3.2 Procedure

Testing took place in either a laboratory or classroom setting, with participants giving informed consent. Participants read a confession transcript and then answered pen and paper questions in order. Supervision by an experimenter ensured that participants did not discuss their responses, change their answers once given, nor read ahead at any time. The ATCC scales were placed last in the test battery to ensure that their inclusion did not alter verdict questions or those relating to confession consistency and voluntariness. Participants acted as individual mock-jurors, rather than as a juror deliberation exercise in order to ascertain their individual belief in suspect guilt. Completion time for the task was approximately 25 minutes.

5.3.3 Stimulus materials

Participants read one of four versions of a fictional transcript of a police interview in which a suspect confesses to a physical assault charge. The transcripts were of the kind that might be produced by transcribing audio or video recordings to be presented in court. In the police interview, the suspect admits going to the victim's house to purchase a used car, and later returning to (unsuccessfully) steal the money he had paid to the victim. During a fruitless search of the house, he encounters the victim in the kitchen. They struggle and she hits her head on the kitchen bench, leaving her bleeding and unconscious. The suspect then flees. In all versions of the transcript, the police officer states that the suspect has previously given a statement denying any involvement, but that they are being given another chance to tell their story and make any changes.

5.3.4 Consistency manipulation

In the inconsistent condition, the suspect's version of events is questioned by the police officer when he deviates from his (unseen) previously given statement. This prompts the suspect to alter his story on five occasions to align with his original interview. In accordance with techniques used by Brewer and Hupfeld (2004), inconsistencies were constructed to indicate that the suspect was confused about the details, rather than deliberately untruthful. For example, the suspect states that he entered the house via the garage, but then corrects his response, saying that he forgot, and actually entered the property via the front door and exited through the garage.

In the consistent condition, while the police interviewer makes it clear that the suspect is being interviewed for a second time, the suspect gives the same version of events that he gave in his previous statement, thereby providing a consistent confession.

5.3.5 Voluntariness manipulation.

Voluntariness was manipulated through the use of coercion by police investigators. In the coerced condition, the suspect remained silent when questioned about his involvement in the assault, and only confessed when the police officer used coercive interrogation techniques. These techniques included suggesting that there was irrefutable evidence against the suspect (*"I have plenty of evidence in this file, so I know you're not telling the truth"*), and that the suspect would be treated more favourably if they confessed (*"it will look much better for you if you say what really happened and show some remorse"*). The police officer also used positive rapport in empathizing with the suspect's role as carer for his mother, and convincing the suspect that he could leave when he confessed (*"you can always change your statement later, OK?"*). In the voluntary condition, no coercion was used and the suspect confessed without prompting.

Copies of each version of the stimulus materials are available as Supporting Information online.

5.3.6 Measures

Participants were asked a number of case-related questions, including whether they found the suspect guilty or not guilty of the assault charge, and how confident they were in their verdict decision, from 1 ("*not at all confident"*) to 10 ("*totally confident"*). Verdict and verdict confidence were combined to form a new dependent variable, called judgment of guilt, following the method outlined by Tenney et al. (2007). Although our analyses focussed on this continuous measure of judgments of guilt, we also analysed our data using the dichotomous verdict measures (*guilty* or *not guilty*). In all cases, the pattern of results was unaltered by using the dichotomous measure.

Manipulation checks of consistency and coercion asked participants to rate on a 10-point scale how consistent they found the suspect's evidence (*very inconsistent*, to *totally consistent*), and how voluntary they believed the suspect's confession to be (*totally involuntary*, to *totally voluntary*). The Attitudes to Coerced Confessions scale was completed as the final measure in the questionnaire, comprising 9 questions with responses scored on a 5-point Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Several participants did not complete both of the subscales; rather than exclude these participants entirely, their data were retained for analyses of measures they did complete.

5.4 Results

5.4.1 Experimental results

Dichotomous verdicts of guilt

The majority of participants gave a guilty verdict (76.1%), with a significant difference between groups, $n = 176$, $\chi^2 (3) = 31.34$, $p < .001$. Dichotomous verdicts by condition are shown in Table 1.

Table 1. *Dichotomous verdicts of guilt by condition*

	N	Not guilty	Guilty
Consistent			
- Voluntary	46	2	44
- Coerced	42	11	31
Inconsistent			
- Voluntary	44	9	35
- Coerced	44	20	24

Manipulation checks. The use of coercion and the presence of confession inconsistencies were clearly visible to participants, with checks indicating that manipulations of consistency and coercion were successful (see Table 2). Consistent confessions were rated as significantly more consistent than inconsistent confessions, $t (147.43) = 10.09$, $p < .001$, $d = 1.52$. Similarly, voluntary confessions were rated as significantly more voluntary than coerced confessions, $t (166.12) = 7.95$, $p < .001$, $d = 1.19$.

Table 2. *Manipulation checks of perceived confession consistency and perceived confession voluntariness*

	N	M (SD)
Consistency check***		
- Consistent	88	5.94 (2.39)
- Inconsistent	87	2.89 (1.52)
Voluntariness check***		
- Voluntary	90	6.59 (2.69)
- Coerced	86	3.73 (2.06)

*** = significant to $p < .001$

Judgments of guilt. To test for a significant interaction between the effects of consistency and coercion on judgments of guilt, a 2 (consistency: consistent, inconsistent) x 2 (voluntariness: voluntary, coerced) between-groups factorial ANOVA was performed on the DV (judgment of guilt).

There was a significant main effect of consistency on judgment of guilt, F (1, 176) = 11.30, p = .001, d = .51, with participants who read an inconsistent confession judging the suspect as less guilty than participants who read a consistent confession. Voluntariness also had a significant effect on judgment of guilt, F (1, 176) = 9.64, p = .002, d =.47, with participants who read a coerced confession judging the suspect as less guilty than those who read a voluntary confession. There was no interaction between consistency and voluntariness, F (1, 176) = .067, p = .796.

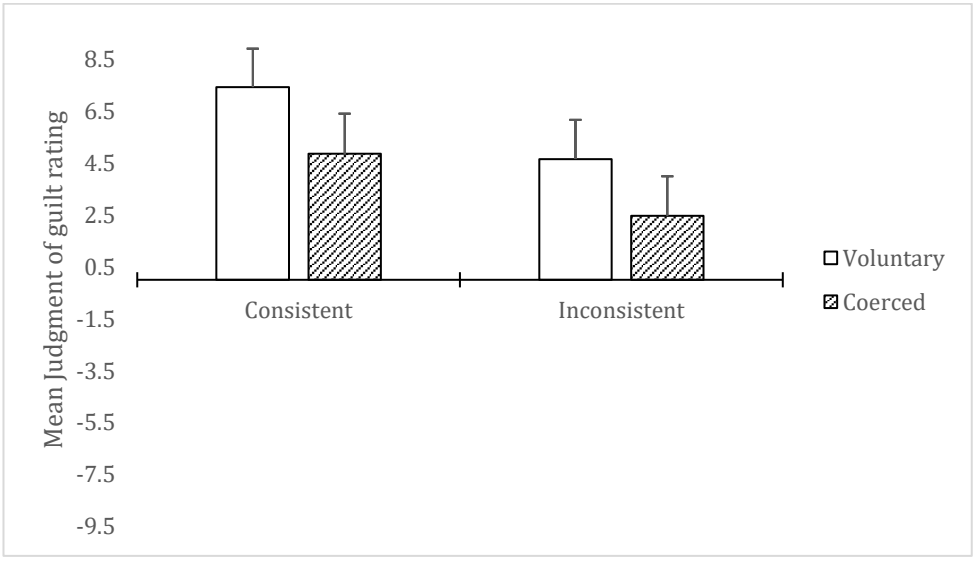

Figure 1. Judgment of guilt by confession consistency and confession voluntariness. Errors bars show 95% confidence intervals.

5.4.2 Factor analysis of the ATCC subscales

An exploratory factor analysis of the two subscales of the ATCC yielded a factor structure very similar to that reported by Clark et al. (2010). As shown in Table 3, a comparison of the component loadings for the subscale items showed little difference between the two studies. Thus, our data support Clark et al.'s conclusion that the subscales of the ATCC measures two distinct constructs, support for coercive interrogation tactics and openness to the possibility that innocent persons might falsely confess.

Internal consistency for the CI subscale matched that of the original study ($\alpha = .72$) and internal consistency for the CC subscale in the current study ($\alpha = .81$) was similar to that found in the original study ($\alpha = .78$). The current findings showed the subscales to be similarly negatively correlated ($r = -.21$, $p = .006$), as in the original study ($r = -.23$, $p < .01$).

Mean scores for the subscales differed somewhat between the current study and Clark et al. (2010). The mean for the CI subscale was 2.35 ($SD = .86$) in the current study compared to 3.00 ($SD = .98$) in the original. However, participants in the original study scored lower on the CC subscale ($M = 2.95$, $SD = .98$) than in the current study ($M = 4.13$, $SD = .75$). As the possible range of scores on the subscales is 1 to 5, the high CC subscale score in the current study indicates that, on average, participants were able to identify that false confessions can be coerced from innocent suspects. This difference may be due to the participant samples, with the original study using jury pool members, while participants in the current study were recruited from the wider university community. We expand on this issue in the Discussion.

Table 3. *Comparison of component loading for ATCC subscale items*

Item	Subscale and item description	Original study (N = 292)		Current study (N = 176)	
		Coerced Confession	Coercive Interrogation	Coerced Confession	Coercive Interrogation
	Coercive Interrogation items				
1	Police officers should be allowed to do whatever it takes to get criminal suspects to confess	-.12	**.65**	-.11	**.55**
2	Police officers should try to make interrogations uncomfortable for criminal suspects	.03	**.82**	-.08	**.78**
3	It is OK for police officers to lie to a suspect during an interrogation because a truly innocent person would not be influenced by the officer's lie	-.31	**.65**	-.09	**.49**
5	Police officers should try to make interrogations stressful for subjects	.07	**.81**	-.07	**.71**
	Coerced Confession items				
4	*An innocent person could be pressured by the police into confessing to a crime they did not commit	**.73**	.08	**.55**	-.11
6	I can see how people might confess to crimes they did not commit if it saved them from being charged with much more serious crimes	**.75**	.02	**.70**	-.04
7	I can see how people might confess to crimes they did not commit if they were threatened by the police	**.78**	-.25	**.78**	-.16
8	I can see how people might decide to confess to crimes they did not commit if a great deal of other evidence suggested they were guilty	**.73**	-.09	**.83**	-.06
9	Sometimes, people will confess to anything to stop a stressful interrogation	**.62**	-.14	**.55**	-.11

N = 176. Loadings were extracted using principal axis factoring with varimax rotation and Kaiser normalization. Values above criterion level (.40) are shown in bold. * The pronoun 'he' used in the original ATCC scale was changed to the neutral pronoun 'they' in the current study.

5.4.3 The predictive validity of the ATCC

Before moving to our main tests of predictive validity, we note that our data replicated Clark et al.'s (2010) results regarding the predictive validity of the ATCC. As in Clark et al.'s results, judgments of the likely guilt of the suspect were positively correlated with scores on the CI subscale, r (169) = .25, p = .001, and negatively correlated with scores on the CC subscale, r (166) = -.30, p < .001. Thus, higher judgments of guilt were associated with greater support for coercive interrogation techniques and lower reported belief that innocent people might falsely confess to a crime. However, as noted in the Introduction, these results might simply reflect a tendency for people who score high on the CI subscale (and low on CC) to be harsh in delivering verdicts; hence, these data alone do not provide strong evidence of the validity of the ATCC.

Moderation analyses. The central analyses concerned the extent to which scores on the ATCC subscales moderated the effects of the voluntariness and inconsistency manipulations on judgments of guilt. Moderation analyses were conducted using PROCESS (Hayes, 2013) to understand the conditions in which confession voluntariness and consistency would influence judgments of guilt. Figures 2 and 3 are plotted slopes to show the effect of condition on judgements of guilt at -1SD (low), 0SD (medium), and 1SD (high) of the moderator.

These analyses provided evidence that the CI subscale of the ATCC is a valid measure of support for coercive interrogation. The relationship between confession voluntariness and judgments of guilt was moderated by support for coercive interrogation techniques, b = 2.65, 95% CI [.871, 4.429], t = 2.94, p = .004. As shown in Figure 2, mock jurors with a low CI score (low in support for coercive tactics) gave significantly lower judgments of guilt when they read a coerced confession rather than a voluntary confession.

The voluntariness of the confession did not alter the judgment of guilt for mock jurors with high CI scores; in other words, among mock jurors who are supportive of coercive interrogation techniques, the presence of coercion had minimal effect on judgments of guilt.

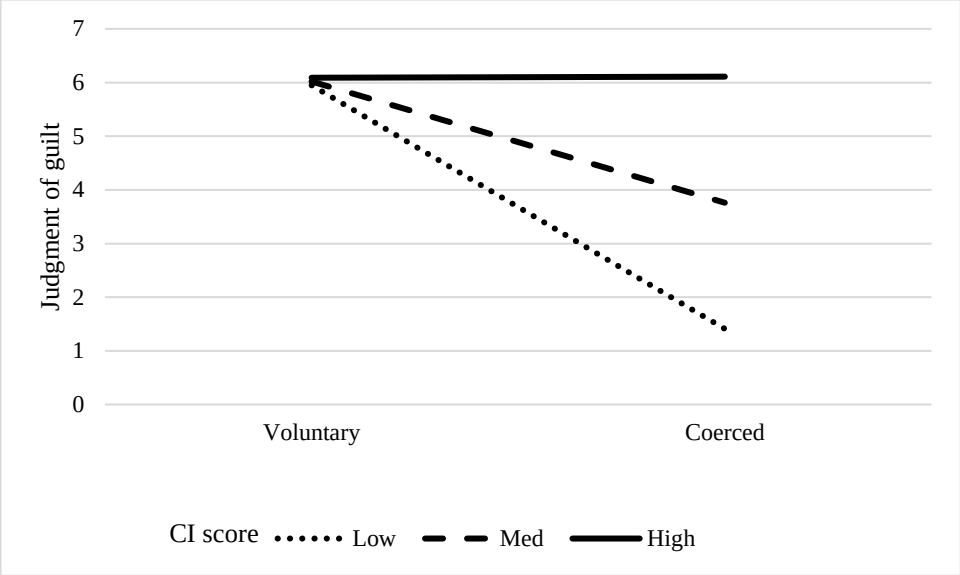

Figure 2. The relationship between confession voluntariness and judgments of guilt, moderated by score on the Coercive Interrogations subscale.

Similarly, the effect of confession inconsistencies on judgments of guilt was moderated by the strength of belief in coerced confessions, b = -2.86, [-4.87, -.85], t = -2.80, p = .006. As shown in Figure 3, among mock jurors with lower scores on the CC subscale (i.e., those with relatively little belief that confessions can be coerced from innocent suspects), the manipulation of inconsistencies had minimal effect on judgments of the suspect's guilt. In contrast, among those with higher scores on the CC subscale (i.e., relatively high belief in coerced confessions), judgments of guilt were lower for confessions that contained inconsistencies than confessions that did not.

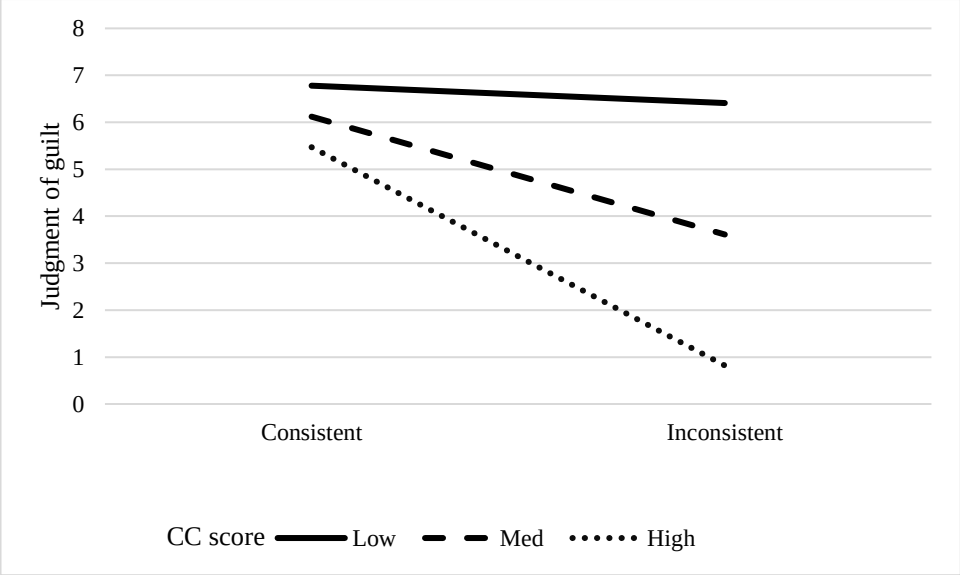

Figure 3. The relationship between confession consistency and judgments of guilt, moderated by score on the Coerced Confessions subscale.

Exploratory moderated mediation analysis. We conducted additional moderated mediation analyses to explore the mechanisms underpinning the moderating role of CI and CC scores on the effects of coercion and confession inconsistencies, respectively. These analyses were exploratory, rather than planned a priori.

We first considered the moderating role played by CI scores. One plausible model (shown in Figure 4) holds that the presence of coercion causes participants to perceive confession evidence as given less voluntarily, but the extent to which this translates to reduced judgments of guilt depends on level of support for coercive interrogation techniques. For participants who oppose coercive techniques, perceiving a confession as less voluntary will likely lead to lower judgments of guilt. However, for participants who support coercive techniques, perceiving a confession as less voluntary will not necessarily lead to lower judgments of guilt. In other words, did some mock jurors in Kassin and Sukel's (1997) 'harmless error' experiment acknowledge the presence of coercion, but then ignore it because of their attitudes toward coercive interrogation techniques?

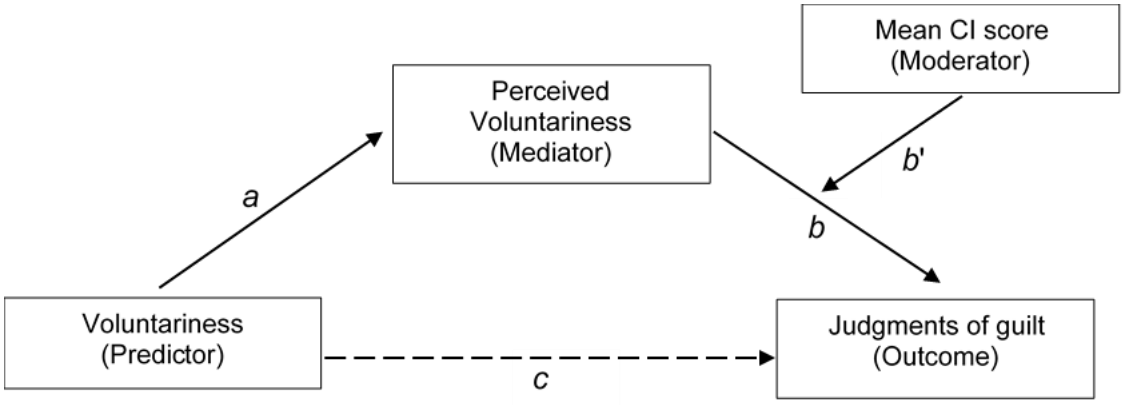

Figure 4. Moderated mediation model to test the mechanism by which support for coercive interrogation techniques (CI score) influences the effect of voluntariness of confessions on judgments of guilt.

Moderated mediation analysis (using PROCESS model 14; Hayes, 2013) provided support for this model. Perceived voluntariness of the confession mediated the relationship between the presence of coercion in the interrogation, and judgments of guilt. The presence of coercion lowered perceived confession voluntariness (the *a* path in Figure 4), b = -2.84 [-3.56, -2.11], $p < .001$. In turn, perceived voluntariness lowered judgments of guilt (*b* path), b = 0.83 [0.54, 1.13], $p < .001$, with a significant indirect effect of coercion on judgments of guilt (*ab* path), b = -2.37 [-2.66, -1.46].

Importantly, the relationship between perceived voluntariness and judgments of guilt (b path) was moderated by mean CI scores, b = -0.47 [-0.76, -0.18], p = .002. Lower perceived voluntariness was associated with lower judgments of guilt, but as support for coercive interrogation techniques went up, the relationship between perceived voluntariness and judgments of guilt became weaker. Hence, for participants who reported relatively low support for coercive techniques, lower perception that a confession had been given voluntarily reduced judgments of guilt, b = -3.51 [-5.02, -2.47]. In contrast, for those who reported supporting coercive techniques, lower perception that a confession had not been

given voluntarily had little effect on their judgment of the suspect's guilt, *b* = -1.22 [-2.66, 0.12]. This finding may help explain why some people state that they ignore a confession, but still take that confession into account when making their verdict decision (e.g., Kassin & Sukel, 1997).

It should be noted that scores on the CI and CC provided weak, non-significant correlations with perceived confession consistency and perceived confession voluntariness (see Table 4). Therefore, any moderating effects cannot be explained by a differential capacity to detect problems in the confession.

Table 4. *Correlational relationship between scores on the ATCC and manipulation checks*

		Consistency Check	Voluntariness check
Mean CI	Pearson correlation	-.04	.13
	Sig.	.60	.09
	N	170	171
Mean CC	Pearson correlation	.00	-.14
	Sig.	.98	.06
	N	167	168

Next, we considered the moderating role of CC scores in the relationship between confession inconsistencies and judgments of guilt. If sometimes inconsistencies are of concern to jurors, and sometimes not (e.g., Henderson & Levett, 2016; Malloy & Lamb, 2016; Palmer et al., 2016; Woestehoff & Meissner, 2016), then the question is raised as to whether confession inconsistencies are perceived differently according to attitudes toward coerced confessions. This could occur even if those attitudes do not alter the actual ability to perceive whether a confession has been given consistently or not. Thus, inconsistencies in

confession evidence might reduce mock jurors' perceptions of consistency, but this might translate to reduced judgments of guilt only for participants who are open to the idea that innocent people sometimes falsely confess (i.e., those who score high on the CC subscale).

We tested this idea using moderated mediated analysis (PROCESS model 14; Hayes, 2013) as shown in Figure 5. Perceived consistency of the confession was the mechanism by which confession consistency influenced judgments of guilt. The presence of confession inconsistencies reduced perceived confession consistency (*a* path), $b = -3.14$ [-3.76, -2.52], $p < .001$. As the perceived consistency of the confession reduced, judgments of guilt also reduced (*b* path), $b = 0.57$ [0.20, 0.94], $p = .003$. The significant indirect effect of inconsistencies on judgments of guilt (*ab* path) confirms that confession errors overall reduced judgments of guilt by decreasing perceived consistency, $b = -1.78$ [-2.99, -0.57]. However, contrary to the model we tested, openness to the idea that innocent people might confess (scores on the CC subscale) did not moderate the relationship between perceived consistency and judgments of guilt, $b = 0.23$ [-0.18, 0.63], $p = .267$.

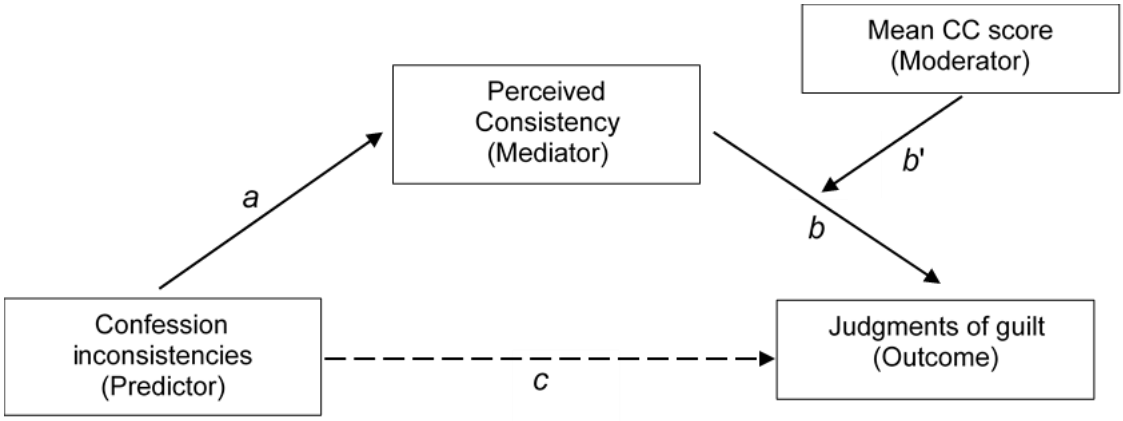

Figure 5. Moderated mediation model to test the mechanism by which openness to the idea that innocent people might falsely confess (CC score) influences the effect of confession inconsistencies on judgments of guilt.

5.5 Discussion

The results of this study show that the ATCC is able to predict which jurors are likely to reduce their judgment of suspect guilt when presented with an inconsistent or coerced confession, and those who will not, and can also help explain the mechanism behind this variance.

5.5.1 Validity and reliability of the ATCC subscales

Comparison with previous study. Tests of reliability and validity confirmed the findings of the original scale developers. The ATCC was found to be a reliable measure of juror attitudes toward coerced confessions, which could successfully predict how mock jurors would perceive suspect guilt when presented with confession evidence. While the original authors (Clark et al., 2010) had tested belief in suspect guilt using descriptions of recanted confession cases from the Innocence Project, they called for researchers to test the scale using more complex materials. The current study used transcripts of police interviews in which a suspect confessed to an attempted robbery and assault and found the ATCC was robust across the different mediums, with scores on the subscales able to predict judgments of guilt when participants read confessions that contained inconsistencies or had been gained by coercion.

As hypothesised, the ATCC subscales were equally able to predict systematic variation in the effects of relevant factors on judgments of guilt. First, the current study confirms that the CI subscale can successfully predict whether a juror will consider the influence of coercion when making their verdict decisions. Using results on the CI subscale we can predict that jurors who are highly supportive of coercive interrogation techniques will dismiss instances of police coercion when assessing the veracity of the confession. Therefore, jurors who have high scores on the CI view confessions equally, regardless of confession quality in terms of coercion. However, a juror who does not believe that the police should have the power to extract confessions using coercion will be more likely to

attribute the suspect's confession to a reason other than guilt and judge them as less guilty than a suspect who gives a consistent confession.

Second, the CC subscale successfully measured whether participants believed that confessions could be coerced from innocent parties. Mock jurors who had high belief in the existence of coerced confessions, judged a suspect who gave an inconsistent confession as less guilty of the crime than a suspect who gave a consistent confession. This effect was not seen in those who had low belief in coerced confessions. The divergent direction of judgments of guilt between the low and high belief in coerced confession groups might be due to different attributions regarding the reasons for the inconsistencies. For example, if a person understands that false confessions are a real phenomenon, they might perceive the inconsistencies as an indication that the suspect is innocent and unfamiliar with the facts of the crime. However, if a person assumes that only guilty people confess, then the inconsistencies might be seen as a sign that the suspect is being purposely inconsistent, and have no effect their belief in the suspect's guilt.

We also considered the possibility that participants might have 'selective vision' when it came to perceiving confession voluntariness or confession inconsistencies, dependent on their CI or CC level. However, this was not the case scores, with subscale scores not related to perceptions of confession voluntariness or confession consistency. Specifically, and with regards to CI, these findings suggest that support for coercive interrogation techniques functions independently of the ability to recognise whether an interrogator has used coercive techniques to aid in the suspect confessing. That is, being wary of the use of coercive interrogation practices does not make you any better at detecting them in a confession, just as being supportive of coercive interview techniques, does not make you unobservant of their presence. Rather, support or rejection of the use of coercion as an

acceptable interrogation method will alter juror perception of the validity of the evidence when making their verdict decisions.

The ATCC also provides the benefit of testing whether individual attitudes can influence perception of suspect guilt, even when they should not. For example, some people might be predisposed to acquit rather than convict, even if the confession should reasonably have been accepted. This was a concern not addressed by Clark et al.'s (2010) results; because the presence of coercion (or other aspects of confession quality) was not manipulated, those results left open the possibility that scores on the ATCC subscales merely reflect willingness to convict based on a confession. Our findings showed that all participants, whether low or high on the CI and CC subscales, assessed confession evidence that appeared to be accurately and truthfully given (i.e., contained no coercion, no inconsistencies) as highly indicative of suspect guilt. That mock jurors were able to successfully identify which of the confessions was likely to be true, without being inappropriately influenced by their overall belief in coerced confessions, is an indication that providing jurors with access to transcripts has only positive benefits.

This is further evidence that the push for videotaped interrogations is likely to reduce wrongful convictions based on false confessions. Not only does video-recording confessions reduce the use of police coercion in the first place (Kassin, Kukucka, Lawson, & DeCarlo, 2014), but jurors also benefit from being able to see how an interrogation has unfolded, and whether the confession has been gained by coercion or contains inconsistencies. A concern is always that some people have a preferred verdict regardless of the content of the actual confession provided, however the ATCC has shown that these two particular attitudes do not color juror judgments in regards to true confession, but only those that contain problematic elements that might indicate that the confession is false.

Although not the main focus of this research, we note that the results replicate the findings of Palmer et al. (2016), who found that inconsistencies in confession evidence reduced guilty verdicts, regardless of whether police coercion was used or not. These findings appear to contradict the raft of false confession cases where jurors convicted on confessions that were both inconsistent and coerced, and is further indication that jurors have variable beliefs about what constitutes valid confession evidence. Palmer et al.'s study used simple confession statements as evidence stimuli; our study extends their findings by replicating their results using police interview transcripts, which contain more detail than simple confession statements and, hence, offer more scope for participants to overlook inconsistencies or evidence of coercion. Together, these and other recent results (e.g., Henderson & Levett, 2016; Woestehoff & Meissner, 2016) point to the optimistic possibility that jurors may be more discerning in their processing of confession evidence than previously assumed.

5.5.2 Limitations

However, despite the general concurrence of overall findings between the original and current studies, there was one notable difference. Clark et al., (2010) called for their scale to be tested among different populations, which has been achieved. However, while student scores on the CI subscale did not differ substantially from the original authors' jury pool sample, the same cannot be said of the median score on the CC subscale. The median score on the CC subscale was higher for the current study than the original study, and sat near the top of possible scores in the range. This may have resulted in the non-significant results when testing the moderated relationship between perceived confession consistency and judgments of guilt, as there may have been a restricted range of scores in the moderator variable (Mean CC). The current study recruited undergraduate students and members of the wider university community, while the original study accessed members of a jury pool that

had been summoned for jury. The CC subscale measures how strongly a person believes that a confession can be coerced from an innocent person, which is a concept that people in general have difficulty understanding (Leo & Ofshe, 1998). While we have no particular evidence to back up this theory, psychology students might be more amenable to the theoretical concept of false confessions than members of the general public, having been exposed to social psychological theories explaining why people sometimes behave in ways that are difficult to understand.

5.5.3 Summary

The current study supported the predictive validity of the ATCC scale through experimental testing using confession transcripts manipulated for consistency and voluntariness. Three key findings from this study may help explain why jurors sometimes ignore confession inconsistencies and evidence of coercion, and sometimes do not.

First, the current study shows that a person's belief in coerced confessions or support for coercive interrogation techniques will not alter their ability to see whether a confession contains inconsistencies or was gained using coercion, nor do they alter their judgments of a truthfully given confession. Therefore, juror variation in judging guilt based on problematic confession evidence is not due to varying inability to see the problems in the confession, or a general propensity towards conservative judgments of guilt. Second, a person's score on the relevant subscale (CI or CC) moderated the strength of the relationship between the related problem in the confession (inconsistencies, or coercion) on judgments of suspect guilt. Therefore, coercion in a confession affects judgments of guilt differentially, dependent on how strongly a juror supports coercive interrogations and how much they believe that confessions can be coerced from innocent suspects. Finally, scores on the CI scale further moderated the strength of the influence that perception of confession voluntariness had on judgments of guilt. That is, a juror's support for coercive interrogations will moderate the

strength of influence that perceived confession voluntariness will have when making judgments of guilt.

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Chapter 6

General Discussion

6.1 Overview of Thesis Aims and Outcomes

False confessions contribute to a significant proportion of wrongful convictions later exonerated courtesy of DNA evidence. While some false confessions might be indistinguishable from true confessions, others are of such low quality that it is difficult, in hindsight, to understand how the jury accepted them as a credible piece of evidence (and often in the absence of any other evidence).

The overall aim of this thesis was to contribute to existing psychological literature on how jurors process confession evidence, and further investigate the circumstances under which jurors are more likely to discount confession evidence when considering a suspect's guilt. The catalyst for the investigating this topic was emerging research suggesting that people can sometimes be better at recognizing and discounting inconsistent confessions than wrongful conviction statistics might suggest (Henderson & Levett, 2016; Palmer et al., 2016; Woestehoff & Meissner, 2016). As this suggestion runs counter to the overwhelming case evidence that jurors are quick to accept any confession as true, we first aimed to test whether jurors would, in the pre-deliberation phase, be able to a) discern whether a confession was inconsistent or not, and b) adjust their belief in the suspect's guilt accordingly. Two empirical studies were designed to answer these questions using simplified, but realistic, trial materials that varied both the types of inconsistencies made in the confession (i.e. contradictions or factual errors), and whether the influence of the inconsistencies depended on the direction of their difference to the facts of the crime (i.e. making the confessor look better or worse).

A further two empirical studies aimed to provide methodological contributions to confession literature by testing whether two existing scales could identify individual juror attributes that might moderate how individuals perceive suspect guilt based on inconsistent confession evidence. We tested the first measure, Need for Cognition, in response to contradictory findings in previous literature as to whether an individual's desire to pursue

complex and intellectually engaging task moderated juror decisions. Next we tested the previously untested Attitudes Toward Coerced Confessions scale, to assess whether it could be used to successfully differentiate individuals according to how much they supported coercive interrogation tactics, and how strongly they believed that confessions could be coerced from innocent people.

A summary of the key empirical findings from these studies is provided in the following sections. Discussion includes methodological and theoretical implications, limitations and directions for future studies. A flowchart of empirical tests conducted in this thesis is shown below (Figure 1).

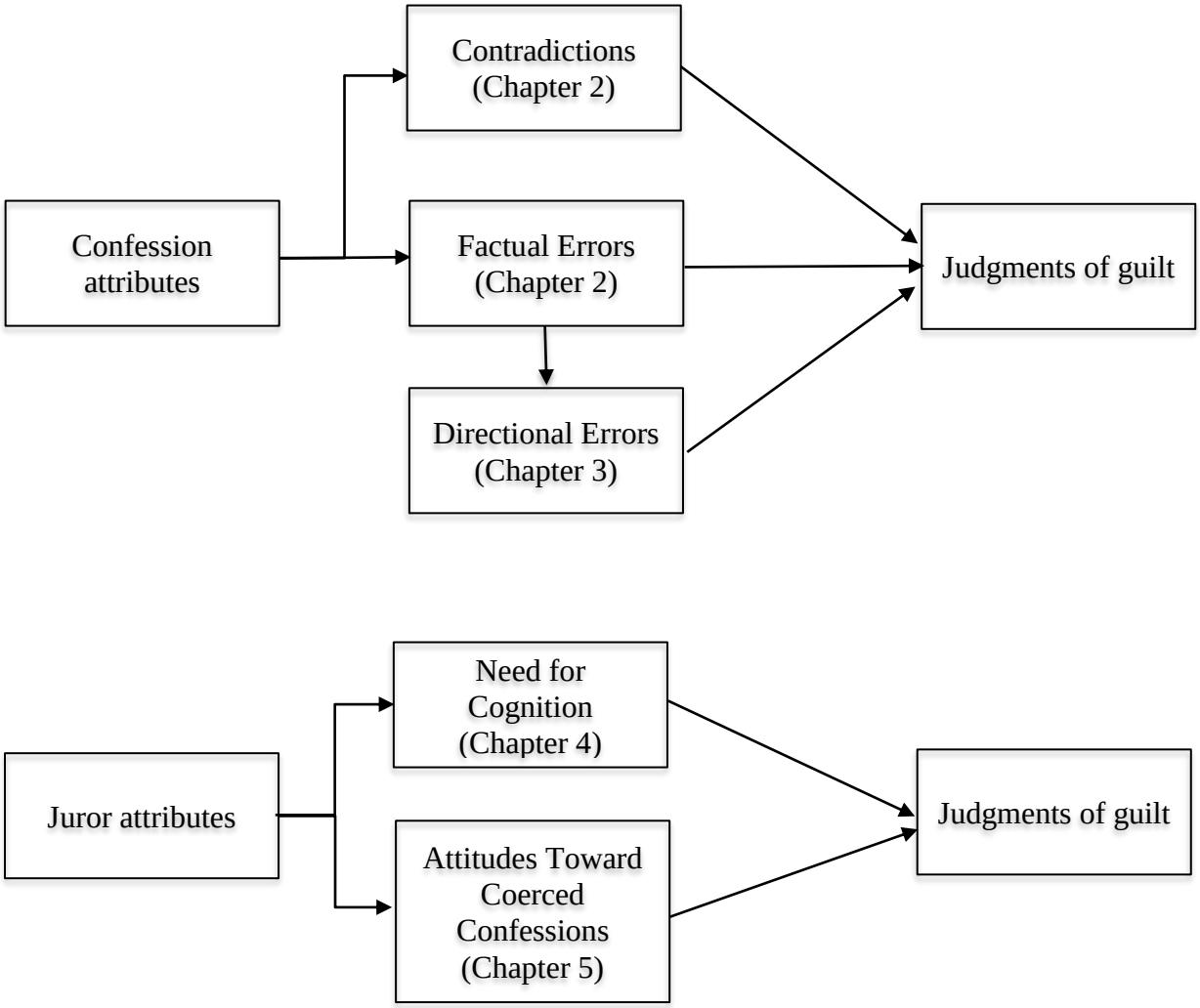

Figure 1. Factors potentially contributing to variance in juror processing of confession evidence. Flowchart of empirical tests.

6.2 Key Empirical Findings and Implications of the Thesis

6.2.1 Juror sensitivity to confession inconsistencies

One suggestion as to why jurors might accept false confession evidence is that they may be insensitive to the existence of inconsistencies in confession evidence (Malloy & Lamb, 2010), and therefore would not take confession consistency into account when making verdict decisions. However, a key finding in each of the four experiments in the current series is that jurors are able to discern inconsistencies in confession evidence and, therefore, their acceptance of inconsistent confession evidence is not because they are unaware of the inconsistencies.

This overall finding suggests that the overwhelming believability of confessions does not actually prevent jurors from noticing confession inconsistencies. Instead, if a juror is faced with an inconsistent confession, they will either attribute the inconsistencies in a way that confirms their assumption of guilt, or they will reduce their belief in the confession and look for alternate reasons why the suspect might be confessing.

6.2.2. Differential weighting of confession inconsistencies

While we found that jurors are overwhelmingly capable of noticing false confessions, our findings suggest that people do not weight confession inconsistencies equally when making their decision. In Chapter 2 we described two experiments that studied the effect of different types of inconsistencies. In the first experiment, we found that when the suspect contradicted his own testimony and then self-corrected the contradictions, judgments of guilt did not reduce in comparison to a consistent confession. A second experiment was conducted to test the effect of factual errors on judgments of guilt, where participants were able to compare the confession transcript to a police report to ascertain the factual accuracy of the confession. Participants significantly reduced judgments of guilt for

suspects who gave factually inaccurate confessions, compared to suspects who gave accurate confessions. The differential treatment of confessions by inconsistency type may provide reason why we see variability in whether jurors accept or reject false confessions– factual errors may raise juror concern of confession veracity in a way that contradictions do not.

The finding that factual errors in a confession reduced judgments of guilt, while contradictions did not, prompted a second experiment (presented in Chapter 3) which questioned whether the effect of factual errors would be altered if the suspect appeared to be increasing or decreasing the severity of the accused crime. The justification for this research lies in the popularity of certain police interrogation practices (i.e. minimization and maximization) which could reasonably be related to whether an innocent person confessing might accidentally overstate or understate the facts of the crime in accordance with the emphasis used by the police. This study aimed to test whether jurors might form individual beliefs about the suspect's behavior (i.e. why they were exaggerating or downplaying the crime) based on perceived ulterior motives. Consistent with the findings of the effect of factual errors in Chapter 2, reduced perception of confession consistency resulted in reduced belief in suspect guilt. However, there was no direct effect of confession consistency on judgments of guilt when the consistent confession was compared to a confession where the suspect had exaggerated the facts of the crime (rendering an inconsistent confession). When the accurate confession was compared to a confession where the suspect admitted to a lesser version of the crime, inconsistencies acted to increase belief in suspect guilt. Therefore, while factual errors will in general reduce the perceived quality of the confession and in turn reduce judgments of guilt, this effect does not apply neatly to instances when the inconsistencies relate to measurable quantities that act to amplify or minimize the crime severity. For example, an error that relates to the time of day that a crime occurred might

relate to overall confession credibility, but is unlikely to increase or decrease the severity of the crime. However, admitting to stealing a smaller amount of money or inflicting a larger number of wounds does alter the magnitude of the confessed crime, and the results shown in Chapter 3 indicate that individuals are unlikely to dismiss the confession if the inconsistencies are skewed either for or against the defendant, and that this may relate to the ulterior motive attributed to the suspect's behavior (i.e. why they have incorrectly stated the facts of the crime).

Despite the finding that jurors are capable of identifying issues in confession quality, and discounting the confession accordingly, the majority of participants in our studies still judged the suspect as guilty, when asked to give a dichotomous verdict of guilt. This fits with both case evidence of wrongful convictions in which incorrect confessions were overwhelmingly accepted by juries (Drizin & Leo, 2004), and experimental studies where mock-jurors were still influenced by confessions they claim to have rejected when making their verdict decision (Kassin & Sukel, 1997).

6.2.3 The role of need for cognition in assessing confession evidence

Need for cognition is the measurable desire to seek out and engage in complex and intellectually challenging tasks (Cacioppo & Petty, 1982). Need for cognition is a logical moderator for juror decision making, especially in the context of decisions that involve the processing of inconsistent evidence. It is reasonable to think that jurors who seek out and enjoy engaging in complex tasks might be better equipped to scrutinize confession evidence than their counterparts with lower need for cognition. However, confession evidence suffers from the paradox of appearing to need little engagement due to the underlying belief that only guilty people confess. Our findings reflect this assumption of guilt, with null results across all four studies indicating no systematic difference of motivation to engage with the confession evidence across different need for cognition levels. Previous research also

suggests that motivation might be the key component in need for cognition, with jurors having naturally inflated motivation to engage in a trial, temporarily equalizing need for cognition levels (see Kassin et al., 1990). We conclude that personal characteristics of jurors may account for the variance in acceptance or rejection of inconsistent confession evidence, but that need for cognition is not one such characteristic.

6.2.4 The role of attitudes toward coerced confessions in juror assessment of guilt

While jurors in our studies were not influenced by need for cognition in assessing inconsistent confession evidence, they were influenced by their attitudes toward coerced confession. Chapter 5 outlined the first independent test of the two subscales of the Attitudes Toward Coerced Confession scale (Clark et al., 2010), in which mock jurors read a confession manipulated to contain coercion and inconsistent elements. We found that these attitudes had a moderating effect on the strength of the relationship between the confession and the jurors belief in the suspect's guilt. That is, jurors who strongly supported coercive interrogation techniques did not reduce their belief in the suspect's guilt when presented with a coerced confession. Similarly, jurors who had strong belief that innocent people could be forced to confess, had lower belief in the suspect's guilt when presented with an inconsistent confession, than jurors who did not think false confessions were possible. These findings contribute to the growing body of literature that collectively aims to understand the variance in juror decisions with regards to false confession evidence.

6.3 Theoretical Implications

The present thesis challenges the idea that jurors will automatically accept any confession to be true, and presents a number of theoretical reasons as to why this belief may be oversimplifying a complex problem. Attribution theory (Kelley, 1973), and the role of suspicion in particular (Fein et al., 1990), provides a relevant framework for juror decision making, and the current series of studies allowed us to theorize how jurors might attribute

the reason behind an inconsistent confession, dependent on the type of inconsistencies present. We found that, rather than simply attributing all confessions to guilt, jurors were motivated to generate alternate reasons why the suspect had confessed, if the confession provided some indication that it may have been falsely given. Chapters 2 describes studies where the ways that jurors could attribute the reason behind the confession inconsistencies, varied by inconsistency type. The results reflect the relative ease of contemplating why a guilty suspect might contradict himself in his confession, versus the relative difficulty of generating a plausible reason for a suspect who cannot correctly recount key facts of the case.

The study described in Chapter 3 makes a theoretical contribution to the story model of juror decision-making (Pennington & Hastie, 1986), where jurors create internal narratives about the crime, and then adapt that narrative to accommodate new evidence and information. The study of the effect of directional errors on juror decisions supports the notion that jurors' internal narratives also adapt to include information that has not been implicitly provided in the evidence, such as the confessor's motivation. When the errors in the confession made the suspect appear to be lessening the severity of the crime, jurors had increased perception of the suspect's guilt in the crime. Verbatim responses confirmed that the increased perception of guilt was due to the belief that the suspect was motivated to deliberately downplay his involvement in the crime in order to attract a lesser penalty.

Individual personality characteristics have been theorized to have a role in juror decision making. While a greater need for cognition did not result in any greater scrutiny of confession evidence, individual attitudes towards the phenomenon of false confessions did influence how inconsistent and coerced confessions were processed. In particular, the study outlined in Chapter 5 indicates that individual support for coercive interrogation techniques does not reduce their capacity to understand that the techniques used are coercive. Instead, the individual supportive of coercion simply believes that the confession is still valid. This

speaks directly to how juries can come to accept blatantly coerced confessions as evidence of guilt. Similarly, the findings showed that jurors who can understand that false confessions occur, are no more likely to see that a confession is inconsistent, but are more likely to have a lower perception of suspect guilt due to the inconsistencies in the confession.

6.4 Methodological Limitations

6.4.1. Ecological validity

The key limitation of the study design utilised in Chapters 2 and 3 is that, by focusing on pre-deliberation confidence in guilt of individual jurors, the methodology fails to provide a direct understanding of why juries will convict based on false confession evidence. While it is important to understand the initial sentiment of jurors when faced with inconsistent confession evidence, juries do make group decisions, either in the majority or unanimously, and the present studies do not address how individual decisions affect and are affected by the deliberation process. Notwithstanding this limitation of direct generalizability, the results of these two studies provide evidence that individual jurors are capable of discerning confession inconsistencies, and are sometimes influenced to suppress the heuristic that only guilty people confess. Future research might study the robustness of the effect of factual errors on judgments of guilt when presented with competing pieces of evidence, and after undergoing the process of group deliberation.

In terms of the overall argument about ecological validity in juror studies, we would like to address some key aspects that are likely to be a concern to readers (some of which have also been noted in previous chapters). Juror experiments are commonly criticized for lacking generalizability, as they generally use student samples (often predominantly female, as is the case in the present studies) and do not sufficiently replicate the complexity and nuance of a court case. These are valid concerns, and a considerable amount of research has

explored the differences between student and community samples in mock-juror studies. Most undergraduate students are jury-eligible, and therefore a part of the sample we are aiming to test. Findings have generally supported the idea that students provide an adequate sample for mock-juror studies. Devine and Caughlin (2014) conducted a meta-analysis involving four participant types: students, community members, venire persons (people who had shown up for jury duty, but not participated), and a mixed group. They found that participant type did not significantly moderate the relationship between juror characteristics (e.g. authoritarianism, need for cognition) and verdict outcomes (either dichotomous or continuous measure of guilt). However, we do acknowledge that there may be circumstances under which participant type may provide an unwitting confound, and that future research may wish to recruit participants with more diversity of race and gender.

6.4.2 Continuous vs dichotomous measures

Juries, made up of individual jurors, are required to return a verdict as to whether they find the suspect guilty or not guilty of the alleged crime. Jurors will have come to their own belief in the suspect's guilt prior to deliberation, even if that belief is ameliorated in the deliberation process. When investigating why juries sometimes accept false confession evidence, we are ultimately asking why individual jurors accept false confession evidence. In order to answer this question successfully, we need to investigate not only what a juror's ultimate verdict would be, but how strongly they believe in that verdict. To measure this strength in belief we ask jurors to give a verdict decision (which increases verisimilitude) and then rate their confidence, then combine these two measures. Although dichotomous verdicts might be used in court, the combined measure provides a clearer picture of the pre-verdict decision making process, which accounts for the popularity of the continuous measure in juror decision-making research. There is evidence to show that continuous measures of guilt do not result in overstated findings about the effect of juror characteristics

on verdict outcomes. Devine and Caughlin (2014) found that a meta-analysis of juror studies showed that continuous measures of guilt produced slightly more conservative observed effects than dichotomous verdicts, when testing the relationship between juror characteristics and suspect guilt. However, as the use of continuous measures is an ongoing criticism of juror studies, future research could investigate different ways of mapping juror beliefs onto dichotomous juror verdicts.

6.5 Directions for Future Research

The results of the studies described in this thesis have helped to explain a small portion of the variance in individual juror decision-making when presented with inconsistent confession evidence. Future research should test the robustness of these findings in a more cognitively demanding situation (such as with a volume of competing trial evidence), and further in a group deliberation setting. Group deliberation might well erode any variance shown in the early decisions of individual jurors, which may help explain why juries continue to accept false confession evidence in court.

6.5.1 Media coverage and the evolving juror

Recent research into juror processing of confession evidence suggests that jurors are becoming less naïve about the possibility of false confessions (Woestehoff & Meissner, 2016). This may be linked to the recent string of high budget false confession documentaries that have captured the public's attention. *Making a Murderer: the Brendan Dassey story, Amanda Knox,* and the recently released *Confession Tapes* have provided the in-depth, extended format needed to educate people about how false confessions occur, and how they are almost impossible to retract. While there is no exact way of measuring the impact of such shows, the greater dispersal of information about the factors that contribute to false confessions may certainly be contributing to a more educated jury. Future research might look at the influence of popular media on people's attitudes towards confession

evidence, to see if watching these shows makes people better at evaluating confessions (i.e. more sensitive to manipulations of confession quality), or just less likely to think the person is guilty.

6.6 Conclusions

The present thesis aimed to test the circumstances under which individuals would be more discerning about the quality and credibility of confession evidence. The research described in this thesis provides evidence that individual jurors are able to detect inconsistencies in confession evidence, and that some types of inconsistencies may prompt a lower confidence in the suspect's guilt. The differential effect of confession attributes adds weight to the argument that interrogations must be recorded fully, as jurors can only assess credibility based on confession consistency if the transcript is sufficiently complete as to provide points of comparison for checking for inconsistencies. Additionally, the research indicates that while some juror characteristics do not appear to moderate juror belief in suspect guilt when viewing an inconsistent confession (i.e. need for cognition), that other individual characteristics can isolate which individuals are likely to accept a coerced confession or deny that a confession could be coerced from an innocent person.

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Appendix A – Information sheets and consent forms

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Juror decisions

Information Sheet for Participants

1. Invitation

I would like to invite you to participate in a psychology experiment investigating the information that jurors use to make verdict decisions. The experiment is being conducted by Glenys Holt and Dr. Matthew Palmer of the School of Psychology at the University of Tasmania.

2. What is the purpose of this study?

The experiment is investigating how juror decisions are shaped by the information that is available to them.

3. Why have I been invited to participate?

For this experiment, we are looking for people aged 18 years or more.

Participation in this study is voluntary – you are entirely free to choose to participate or not, and there will be no consequences if you decide not to participate. If you do participate, any information you provide will be anonymous and no participants in the experiment will be individually identifiable.

4. What will I be asked to do?

Participation would require approximately 30 minutes of your time on only one occasion and would take place in a room in the Psychology building on the UTAS campus.

The experiment involves reading some information about a courtroom trial and answering some questions about it.

Important information - Before you decide whether you would like to participate, please note that some of the information presented may describe low level violence. The description will not be graphic. However, if you would rather not read information that describes low-level violence, you should not participate in this study.

5. Are there any possible benefits from participation in this study?

The results of this experiment will help us to understand what factors shape juror decisions. This information may help us develop better instructions for jurors.

6. Are there any possible risks from participation in this study?

Although the information presented in this study is not graphic, some participants may find the description of low-level violence disturbing.

7. What if I change my mind during or after the study?

That's fine - you are free to withdraw from the study at any time, and without providing an explanation. If you choose to withdraw during the study, your responses will be destroyed. If

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you complete the study, you will not be able to withdraw your data because it will be stored in anonymous form (and so we will not be able to identify which responses are yours).

8. What will happen to the information when this study is over?

The data from this study will be kept in secure storage on the University of Tasmania premises for a period of five years after any publications (e.g., in academic journals) that involve the data. After this period, the data will be archived. Only the researcher will have access to the raw data.

The data will be stored anonymously. All responses will be anonymous and no identifying information will be collected from participants.

9. How will the results of the study be published?

The results of the study will be published in an academic journal. Once the study has been completed, you will be able to access the results by visiting the website below:

http://www.utas.edu.au/psychology/research/research-project-reports

No individual participants will be identifiable in the publication of the results.

10. What if I have questions about this study?

If you have any questions about this study, please feel free to contact Glenys Holt via email: glenys.holt@utas.edu.au, or Dr Matthew Palmer via email: Matthew.Palmer@utas.edu.au, or phone: (03) 6324 3004.

This study has been approved by the Tasmanian Social Sciences Human Research Ethics Committee. If you have concerns or complaints about the conduct of this study, please contact the Executive Officer of the HREC (Tasmania) Network on (03) 6226 7479 or email human.ethics@utas.edu.au. The Executive Officer is the person nominated to receive complaints from research participants. Please quote ethics reference number H0012662.

This information sheet is for you to keep. If you would like to participate in this study, please ask the researcher for a Consent Form to complete.

Thank you for your attention - your time is very much appreciated.

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Juror decisions

Participant Consent Form

1. I agree to take part in the research study named above.
2. I have read and understood the Information Sheet for this study.
3. The nature and possible effects of the study have been explained to me.
4. I understand that the study involves reading information about a courtroom trial and answering questions about it.
5. I understand that participation involves no foreseeable risks.
6. I understand that all research data will be securely stored on the University of Tasmania premises for five years from the publication of the study results, and will then be destroyed unless I give permission for my data to be archived.

   I agree to have my study data archived. (Note that your data will be stored anonymously.)

   Yes ☐ No ☐
7. Any questions that I have asked have been answered to my satisfaction.
8. I understand that the researchers will maintain confidentiality and that any information I supply to the researcher will be used only for the purposes of the research.
9. I understand that the results of the study will be published so that I cannot be identified as a participant.
10. I understand that my participation is voluntary and that I may withdraw at any time without any effect.

    I understand that I will not be able to withdraw my data after completing the experiment as my data will be anonymous.

Participant's name: _____

Participant's signature: _____

Date: _____

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Statement by Investigator

☐ I have explained the project and the implications of participation in it to this volunteer and I believe that the consent is informed and that he/she understands the implications of participation.

If the Investigator has not had an opportunity to talk to participants prior to them participating, the following must be ticked.

☐ The participant has received the Information Sheet where my details have been provided so participants have had the opportunity to contact me prior to consenting to participate in this project.

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Investigator's name:

Investigator's signature: _____

Date: _____